CHAPTER 3 ENVIRONMENTAL CHECKLIST

PROJECT INFORMATION	
1. Project Title:	Del Norte Coast Redwood State Park 69 kV Electric Transmission Line Vegetation Management Program
2. Lead Agency Name & Address:	California Department of Parks & Recreation
3. Contact Person & Phone Number:	Patricia DuMont 916-445-9081
4. Project Location:	Del Norte Coast Redwood State Park
5. Project Sponsor & Address:	California Department of Parks & Recreation North Coast Redwoods District 1111 Second Street Crescent City, CA 95531
6. General Plan Designation:	State Park
7. Description of Project:	Pacific Power proposes to conduct vegetation management activities in Del Norte Coast Redwoods State Park along the Line 87 power line. This IS/MND covers the section of Line 87 that is located within Del Norte Coast Redwoods State Park. Line 87 requires vegetation management work to comply with State and federal clearance requirements. Pacific Power's existing vegetation management program controls tall growing vegetation under or around Pacific Power's power lines to provide safe and reliable power to its customers. Vegetation conditions can often pose significant threats to transmission facilities, which can result in lengthened power outages and safety risks for the public. This MND addresses potential environmental impacts from the Vegetation Management Program and provides Mitigation Measures to reduce those impacts.
8. Surrounding Land Use & Setting:	Land uses surrounding the park are primarily recreational. The project site is bordered by Jedediah Smith Redwoods State Park to the north, Redwood National Park and Del Norte Coast Redwoods State Park to the west, Six Rivers National Forest to the east, additional parts of Del Norte Coast Redwoods State Park to the west, and private timberland to the south
9. Approval Required from Other Public Agencies:	Additional approval or permits that could be required are as follows: • If construction on roads requires excavation, a Cultural Resources Permit 5024 may be required. • If culverts on roads need to be replaced, consultation with pertinent State and federal agencies will take place to obtain proper permits (401, 404, and 1600). Consultation for stormwater protection measures may also be required (i.e. NPDES through the North Coast Water Board). • Prior to operations, a letter of Technical Assistance will be obtained from the USFWS, identifying any operating restrictions for the Northern Spotted Owl or the marbled murrelet. • Consultation with CDFW will be initiated prior to operations that may affect the marbled murrelet.

ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED

If implemented as written, this project could result in a "Potentially Significant Impact" involving at least one area of the environmental factors checked below, as indicated in the Initial Study on the following pages.

☐ Aesthetics	☐ Agricultural & Forestry Resources	☐ Air Quality
☐ Biological Resources	☐ Cultural Resources	☐ Geology/Soils
☐ Hazards & Hazardous	☐ Hydrology/Water Quality	☐ Land Use/Planning
☐ Materials	☐ Noise Population/Housing	☐ Public Services
☐ Mineral Resources	☐ Transportation/Traffic	☐ Utilities & Service Systems
☐ Recreation	☐ Mandatory Findings of Significance	☒ None

DETERMINATION

On the basis of this initial evaluation:

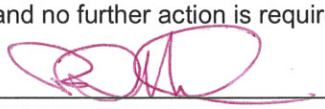
I find that the proposed project COULD NOT have a significant effect on the environment and a NEGATIVE DECLARATION will be prepared. ☐

I find that although the original scope of the proposed project COULD have had a significant effect on the environment, there WILL NOT be a significant effect because revisions/mitigations to the project have been made by or agreed to by the applicant. ☒

A MITIGATED NEGATIVE DECLARATION will be prepared. I find that the proposed project MAY have a significant effect on the environment and an ENVIRONMENTAL IMPACT REPORT or its functional equivalent will be prepared. ☐

I find that the proposed project may have a "potentially significant impact" or "potentially significant unless mitigated impact" on the environment. However, at least one impact has been adequately analyzed in an earlier document, pursuant to applicable legal standards, and has been addressed by mitigation measures based on the earlier analysis as described in the report's attachments. An ENVIRONMENTAL IMPACT REPORT is required, but it will analyze only the impacts not sufficiently addressed in previous documents. ☐

I find that although the proposed project could have had a significant effect on the environment, all potentially significant effects have been adequately analyzed in an earlier EIR or Negative Declaration, pursuant to applicable standards, and have been avoided or mitigated, pursuant to an earlier EIR, including revisions or mitigation measures that are imposed upon the proposed project. Therefore, all impacts have been avoided or mitigated to a less-than-significant level and no further action is required. ☐



6.3.13

Patricia DuMont
Environmental Compliance Supervisor
Northern Service Center

Date

EVALUATION OF ENVIRONMENTAL IMPACTS

1. A brief explanation is required for all answers, except "No Impact", that are adequately supported by the information sources cited. A "No Impact" answer is adequately supported if the referenced information sources show that the impact does not apply to the project being evaluated (e.g. the project fall outside a fault rupture zone). A "No Impact" answer should be explained where it is based on general or project specific factors (e.g. the project will not expose sensitive receptors to pollutants, based on a project specific screening analysis.

2. All answers must consider the whole of the project related effects, both direct and indirect, including off-site, cumulative, construction, and operational impacts.

3. Once the lead agency has determined that a particular physical impact may occur, the checklist answers must indicate whether that impact is potentially significant, less than significant with mitigation, or less than significant. "Potentially Significant Impact" is appropriate when there is sufficient evidence that a substantial or potentially substantial adverse change may occur in any of the physical conditions within the area affected by the project that cannot be mitigated below a level of significance. If there are one or more "Potentially Significant Impact" entries, an EIR is required.

4. A "Mitigated Negative Declaration" (Negative Declaration: Less Than Significant with Mitigation Incorporated) applies where the incorporation of mitigation measures, prior to declaration of project approval, has reduced an effect from "Potentially Significant Impact" to a "Less Than Significant Impact with Mitigation". The lead agency must describe the mitigation measures and briefly explain how they reduce the effect to a less than significant level.

5 Earlier analyses may be used where, pursuant to the tiering, program EIR, or other CEQA process, an effect has been adequately analyzed in an earlier IER (including a General Plan) or Negative Declaration [CCR Guidelines for the Implementation of CEQA, §15063(c)(3)(D)]. References to an earlier analysis should:

   a) Identify the earlier analysis and state where it is available for review.

   b) Indicate which effects from the environmental checklist were adequately analyzed in the earlier document, pursuant to applicable legal standards, and whether these effects were adequately addressed by mitigation measures included in that analysis.

   c) Describe the mitigation measures in this document that were incorporated or refined from the earlier document and indicate to what extent they address site-specific conditions for this project.

6. Lead agencies are encouraged to incorporate references to information sources for potential impacts into the checklist or appendix (e.g. general plans, zoning ordinances, biological assessments). References to a previously prepared or outside document should include an indication of the page or pages where the statement is substantiated.

7. A source list should be appended to this document. Sources used or individuals contacted should be listed in the source list and cited in the discussion.

8. Explanation(s) of each issue should identify:

   a) the criteria or threshold, if any, used to evaluate the significance of the impact addressed by each question and

   b) the mitigation measures, if any, prescribed to reduce the impact below the level of significance.

ENVIRONMENTAL SETTING

The powerline ROW crosses through the Del Norte Coast Redwoods State Park and is located in the coastal mountains of northwestern Del Norte County. Del Norte County is located approximately 250 miles northwest of the City of Sacramento and 115 miles northwest of the City of Redding. Del Norte County is bordered by the State of Oregon to the north, Siskiyou County to the east, Humboldt County to the south, and the Pacific Ocean to the west. The County is approximately 1,008 square miles in size, and is occupied by an estimated population of 29,114 in 2009 (U.S. Census Bureau 2010).

The powerline ROW site lies almost entirely within Del Norte Coast Redwoods State Park, a forested state park with year-round access from U.S. Highway 101. In the past, prior to becoming a state park, timbered areas of the lands were used for commercial logging. The Mill Creek Watershed in the park is traversed by timber hauling roads and associated skid trails and log landings that are no longer used for that purpose. The State Park contains the Mill Creek and Rock Creek drainages and their tributaries. The Park contains a few remaining old growth redwood stands, Douglas-fir forests, and tan-oak forests.

Coastal and inland vistas are available from several high-elevation vantage points within the Park. The overlooks offer views of the Pacific Ocean, Crescent City, and the “Klamath Knot”, a mountain range of ecological interest to the north within southern Oregon.

Land uses surrounding the park are primarily recreational. The project site is bordered by Jedediah Smith Redwoods State Park to the north, Redwood National Park and Del Norte Coast Redwoods State Park to the west, Six Rivers National Forest to the east, additional parts of Del Norte Coast Redwoods State Park to the west, and private timberland to the south (See Figure 1).

I. AESTHETICS

Environmental Setting

The project site lies within the coastal mountains of northwestern Del Norte County and is inside the Del Norte Coast Redwoods State Park, a forested park with year-round access from U.S. Highway 101. The powerline traverses old growth and second growth forests in the State Park. Vegetation along the powerline has been trimmed for many years to protect the line from damage. The present action will maintain the trimming activity with specific rules, procedures, and mitigation measures applied to protect the forest and the existing visual character of the forest. The Park contains natural communities, including the Mill Creek and Rock Creek drainages and their tributaries, a few remaining old growth redwood stands, Douglas-fir forest, and tan-oak forest. Adjacent reserves, such as Jedediah Smith Redwoods State Park, provide a good approximation of the visual characteristics of old-growth, the most striking of which is the presence of large diameter, widely-spaced redwood trees (Giusti 2004). The visual qualities of old-growth redwood forests are accentuated by a diverse understory of one or more native plant species including rhododendron (*Rhododendron macrophyllum*), California huckleberry (*Vaccinium ovatum*), western sword fern (*Polystichum munitum*) and salmon berry (*Rubus spectablis*) (Mahony and Stuart 2000).

Coastal and inland vistas are available from several high-elevation vantage points within the State Park. The overlooks offer views of the Pacific Ocean, Crescent City, and the "Klamath Knot," a mountain range of ecological interest to the north within southern Oregon. The Park is approximately 5 miles southeast of Crescent City, California.

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
I. AESTHETICS. Would the project:				
a) Have a substantial adverse effect on a scenic vista?	☐	☐	☒	☐
b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?	☐	☐	☒	☐
c) Substantially degrade the existing visual character or quality of the site and its surroundings?	☐	☐	☒	☐
d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?	☐	☐	☐	☒

Would the project:

a) Have a substantial adverse effect on a scenic vista?

Less Than Significant Impact. Vegetation management activities along Line 87 will not have a significant adverse impact on available views of these scenic areas. Thinning and trimming of the vegetation under and adjacent to the powerline has been ongoing since the powerline has been in existence. Project vegetation management procedures will assure that vegetation

management activities are continued without changing the visual aspect of the powerline corridor. Scenic vistas available from ridgelines along the powerline will continue to be available and remain unchanged.

b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?

Less Than Significant Impact. Del Norte Coast Redwoods State Park is accessible from U.S. Highway 101, a State Scenic Highway. Proposed vegetation management activities, planned to include specified methods for thinning and trimming of the vegetation under and adjacent to the powerline, and vegetation clearing and cutting of downed logs within transmission corridor access roads, will not represent a substantial change from existing conditions. Project vegetation management procedures and biological resource mitigation measures, together with the guidelines detailed in the Overview of Vegetation Management Activities for Electric Transmission Line 668087 Del Norte to Yurok 69 kV (Appendix A) will guide vegetation management activities along Line 87. In cases of conflicting direction with the existing Overview of Vegetation Management Activities document, the procedures contained herein and the mitigation measures will be used since these are the result of discussions with the resource agencies and DPR. Adverse impacts to scenic resources will be prevented, and a less than significant impact to scenic resources will occur.

c) Substantially degrade the existing visual character or quality of the site and its surroundings?

Less Than Significant Impact. Proposed vegetation management activities, which include thinning and trimming of the vegetation under and adjacent to the powerline, and vegetation clearing and cutting of downed logs within transmission corridor access roads, will not substantially degrade the existing visual character or quality of the site and its surroundings. The natural appearance of the landscape will not be substantially altered. Existing view sheds will not be obstructed, and the natural beauty of the park will be maintained. A less than significant impact will occur.

d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?

No Impact. Vegetation management activities will occur during daylight hours only. No new buildings or improvements to existing buildings are planned as part of the proposed project. No change in lighting or resultant glare will occur.

II. AGRICULTURE AND FORESTRY RESOURCES

Environmental Setting

The powerline ROW is within Del Norte Coast Redwoods State Park is part of the State Parks System. The land is zoned park land in Del Norte County. Commercial timber operations were discontinued as part of the transition of the property from private timber holdings to public parkland in 2002. The adjoining land to the east and south of the Park is Six Rivers National Forest and commercial timberland, respectively. Land to the north and west is Redwood National Park, and Jedediah Smith Redwoods State Park. The Park is almost entirely forest land; there is no agricultural, farmland, and/or Williamson Act contract land on site.

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
II. AGRICULTURE AND FORESTRY RESOURCES. In determining whether impacts to agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Model (1997) prepared by the California Dept. of Conservation as an optional model to use in assessing impacts on agriculture and farmland. In determining whether impacts to forest resources, including timberland, are significant environmental effects, lead agencies may refer to information compiled by the California Department of Forestry and Fire Protection regarding the state's inventory of forest land, including the Forest and Range Assessment Project and the Forest Legacy Assessment project; and forest carbon measurement methodology provided in Forest Protocols adopted by the California Air Resources Board. Would the project:				
a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?	☐	☐	☐	☒
b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?	☐	☐	☐	☒
c) Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g))?	☐	☐	☐	☒
d) Result in the loss of forest land or conversion of forest land to non-forest use?	☐	☐	☐	☒
e) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use?	☐	☐	☐	☒

a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?

b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?

No Impact (a, b). The project proposes to conduct vegetation management activities along Line 87. No agricultural or farming operations are present within the project site. Farmland mapped by the California Resources Agency would not be converted to non-agricultural use. The proposed project would not conflict with existing zoning for agricultural use, or a Williamson Act contract. No impacts would occur.

c) Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g))?

No Impact. State parks are not subject to local land use plans and/or policies. Project implementation involves conducting vegetation management activities along Line 87 to prevent damage to power lines and improve access to the transmission corridor. Commercial extraction of timber is not allowed in State Parks per California Public Resource Code (PRC 5001.65). No impacts would occur.

d) Result in the loss of forest land or conversion of forest land to non-forest use?

e) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use.

No Impact (d, e). All land areas along the ROW will remain forest land. The proposed project would not result in the loss of forest land or conversion of forest land to non-forest use. Vegetation management activities will be limited to thinning and trimming of the vegetation under and adjacent to the power line, and minor vegetation clearing and cutting of downed logs within the transmission corridor and on access roads. The project would not involve other changes in the existing environment that could result in conversion of Farmland or forest land to non- agricultural use.

III. AIR QUALITY

The project site is in Del Norte County, which is part of the North Coast Air Basin and is under the jurisdiction of the North Coast Unified Air Quality Management District (NCUAQMD) and the U.S. Environmental Protection Agency (EPA) Region IX. Humboldt, Trinity, and Del Norte Counties all fall under the regional jurisdiction of the NCUAQMD, whose main purpose is to enforce local, State, and federal air quality laws and regulations. The California Air Resources Board (CARB) tracks attainment or air quality standards (established by both EPA and NCUAQMD) for basins throughout the State. Attainment status for Del Norte County and the North Coast Basin is described below and summarized in Table 3-1. An area is designated in attainment if the State standard for the specified pollutant was not violated at any site during a three-year period. Del Norte County is currently in attainment with all California standards including carbon monoxide, hydrogen sulfide, lead, ozone, nitrogen dioxide, sulfur dioxide, and sulfides. The NCUAQMD is in non-attainment with California standards for particulate matter (PM_{10} or particles with an aerodynamic diameter of 10 microns or less). The major sources of PM_{10} are combustion (e.g. wood smoke, emissions from industry, automobiles, and diesel engines) and dust (e.g. airborne soil, road dust caused by vehicle travel). An area is designated in non-attainment if there was at least one violation of a State standard for the specified pollutant within the area boundaries. With respect to federal standards, the North Coast Air Basin is in attainment of all federal standards and is undetermined for $PM_{2.5}$ pollutants.

Table 3-1. Air Quality Standards in Del Norte Coast Redwoods State Park

Pollutant	Averaging Time	State Status	National Status
Inhalable particulate matter	24-hr Annual	Non-Attainment	Attainment
Fine particulate matter	24-hr Annual	Unclassified	Unclassified/Attainment
Ozone	1-hr	Attainment	No federal standard
	8-hr	No State Standard	Unclassified/Attainment
Carbon monoxide	1-hr and 8-hr	Unclassified	Unclassified/Attainment
Nitrogen-dioxide	Annual	Attainment	Unclassified/Attainment
Sulfur dioxide	24-hr	Annual Attainment	Unclassified

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
III. AIR QUALITY. Where available, the significance criteria established by the applicable air quality management or air pollution control district may be relied upon to make the following determinations. Would the project:				
a) Conflict with or obstruct implementation of the applicable air quality plan?	☐	☐	☒	☐
b) Violate any air quality standard or contribute substantially to an existing or projected air quality violation?	☐	☐	☒	☐
c) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors)?	☐	☐	☒	☐
d) Expose sensitive receptors to substantial pollutant concentrations?	☐	☐	☒	☐
e) Create objectionable odors affecting a substantial number of people?	☐	☐	☒	☐

Would the project:

a) Conflict with or obstruct implementation of the applicable air quality plan?

b) Violate any air quality standard or contribute substantially to an existing or projected air quality violation?

Less Than Significant Impact (a, b). Emissions from equipment utilized for vegetation management can be generally grouped into 2 types: (1) emissions from fuel combustion (diesel, gasoline) and (2) fugitive dust from equipment. Emissions from fuel combustion include: reactive organic gas (ROG); carbon monoxide (CO); nitrogen oxides (NO_x); particulate matter (PM); sulfur oxides (SO_x); and carbon dioxide (CO_2). In 1994, CARB implemented regulations to limit emissions from vegetation maintenance equipment. Those regulations became more stringent for equipment sold in 1999 and later. Consequently, turnover in the equipment fleet is a key factor for reducing emissions.

CARB's recommended method estimates emissions from vegetation management equipment based on the following factors:

1. Equipment rating
2. Load factor which is defined as equipment usage frequency
3. Emission factors
4. Operating hours

Table 3-2 shows the daily estimated emissions from chain saws, the primary source of emissions associated with proposed vegetation management activities. The emission factors used to estimate equipment emissions in Table 3-2 include exhaust and evaporation. The following assumptions have been made: (a) 2006 equipment; (b) typical chain saw horsepower; (c) typical load factor for construction equipment; (d) typical emission factor for construction equipment; (e) 8 hours/day operating schedule per chain saw; and (f) six chainsaws operating at any one time (anticipated maximum), operated by two three-person crews (anticipated maximum) with one chainsaw per person. Thresholds for ROG, CO, NO_x, and PM are from NCUAQMD. NCUAQMD does not have thresholds for SO_x and carbon dioxide equivalents (CO_2e); hence, the SO_x and CO_2e thresholds are from other air districts (South Coast Air Quality Management District [AQMD] and Bay Area AQMD, respectively).

Table 3-2. Peak Day Chain Saw Operational Emissions

	Emissions (lbs/day)					
Source	**ROG**	**CO**	**NO_x**	**PM**	**SO_x**	**CO_2e**
Chain Saws	0.59	1.90	3.99	0.25	0.05	459.55
Significance Threshold	219	548	219	88	1501	66442
Estimated Percentage of Daily Emissions Allowance to be Generated by Chain Saws[3]	0.27%	0.35%	1.82%	0.28%	0.03%	6.92%
Significant Impact?	No	No	No	No	No	No

ROG = reactive organic gas; CO = carbon monoxide; NO_x = nitrogen oxides; PM = particulate matter; SO_x = sulfur oxides; CO_2e = carbon dioxide equivalents

Sources of emission factors: URBEMIS 2007

1 South Coast AQMD threshold.
2 Bay Area AQMD thresholds, converted from metric tons/year to lbs/day.
3 Calculated by dividing emissions (lbs/day) by respective significance threshold.

Estimated emission levels from chain saws, the primary source of emissions associated with proposed vegetation management activities, for all pollutants addressed are well below the respective significance thresholds. Additional emissions from other equipment (trucks, ATVs, mechanical chipper, and hedger) are not expected to increase estimated emission levels substantially; hence, total emission levels are not expected to exceed significance thresholds. Because proposed vegetation management activities are not expected to create air emissions that exceed air quality thresholds, an inconsistency with the NCUAQMD air quality plan would not be created. No population or employment growth will be associated with the vegetation management activities; therefore, growth estimates in the NCUAQMD air quality plan will not be exceeded. No air quality standards will be violated, and no substantial contribution to an existing or proposed air quality violation will occur. The impact is considered less than significant.

c) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors)?

Less Than Significant Impact. Estimated emission levels from chain saws, the primary source of emissions associated with proposed vegetation management activities, for all pollutants addressed are well below the respective significance thresholds. Additional emissions from other equipment (trucks, ATVs, mechanical chipper, and hedger) are not expected to increase estimated emission levels substantially; hence, total emission levels are not expected to exceed significance thresholds. Because the project is not expected to exceed the daily threshold values, a cumulatively considerable net increase would not occur.

Tree trimming and vegetation management activities have been conducted along the power line corridor for many years. Vegetation management activities, as currently proposed and addressed within this IS/MND, include more hand held equipment and less heavy mechanical equipment than historical activities because truck access to the power line will be restricted. This change will result in a net decrease in the emission of criteria pollutants from historical levels, and a reduced cumulative contribution. The impact is less than significant.

d) Expose sensitive receptors to substantial pollutant concentrations?

Less Than Significant Impact. There are no sensitive receptors near the power line ROW. Substantial pollutant concentrations will not be generated as emission levels are considerably below significance thresholds. The impact is, therefore, considered less than significant.

e) Create objectionable odors affecting a substantial number of people?

Less Than Significant Impact. Diesel-powered trucks or equipment, when utilized, could create temporary and intermittent odors, but would dissipate rapidly. No chemicals will be utilized during vegetation management activities. Crew personnel should only experience a temporary effect from diesel exhaust emissions, and there are no sensitive receptors near the powerline ROW. A less than significant impact is expected to occur.

IV. BIOLOGICAL RESOURCES

Existing Setting

Plants

Seventy eight rare and endangered plant species have potential to occur in the project assessment area. The project assessment area includes the Childs Hill U.S. Geological Survey 7.5' quadrangle, within which the Line 87 ROW within the State Park is located, and the seven surrounding quadrangles (Crescent City, Sister Rocks, Cant Hook Mountain, Gasquet, Hiouchi, Requa, and Klamath Glen). Results of a query of the California Native Plant Society (CNPS, 2013) Inventory of Rare and Endangered Plants and the California Natural Diversity Database (CNDDB) for known occurrences of rare plants within the project assessment area, including accompanying mapping, are provided in Appendix B. Of those seventy eight rare and endangered plant species, there are 25 California Native Plant Society (CNPS) California Rare Plant Rank (CRPR) 1B species (plants that are rare, threatened, or endangered in California

and elsewhere), 39 CRPR 2 species (plants that are rare, threatened, or endangered in California, but more common elsewhere), 3 CRPR 3 species (plants about which we need more information), and 34 CRPR 4 species (plants of limited distribution; a watch list). There is only one species known to overlap with the project site, maple-leaved checkerbloom (S*idalcea malachroides,* CRPR 4.2*).* McDonald's rock cress (*Arabis macdonaldiana*) and Western lily (*Lilium occidentale*), two plants listed as endangered both federally and in the State of California, have the potential to occur in the project area. Leafy reed grass (*Calamagrostis foliosa*) listed as rare in the State of California, also has potential to occur in the project area.

Fish and Wildlife

The wildlife diversity is this area is relatively high because of the variety of habitat types. (Stillwater Associates, 2002). Results of a query of the CNDDB for known occurrences of special status wildlife within the project assessment area, including accompanying mapping (CNDDB, 2013), are provided in Appendix C.

Larger mammals known to occur in the Park area include gray fox (*Urocyon cinereoargenteus*), coyote (*Canis latrans*), black bear (*Ursus americanus*), river otter (*Lutra canadensis*), bobcat (*Felis rufus*), mountain lion (*Felis concolor*), black-tailed deer (*Odocoileus hemionus*), and Roosevelt elk (*Cervus elaphus rooseveltis*). Small mammals adapted to forest habitats in this area include deer mice (*Peromyscus maniculatus*), dusky-footed woodrats (*Neotoma fuscipes*), northern flying squirrels (*Glaucomys sabrinus*), California red tree voles (*Arborimus longicaudus*) (Species of Special Concern [SSC)], and red-backed voles (*Clethrionomys californicus*). Humboldt marten (*Martes americana humboldtensis*) (SSC), which were believed to be extinct, has been documented on U.S Forest Service lands to the east. The Pacific fisher (*Martes pennanti*), another SSC mustelid has been documented within the Park.

Streams within the Park support both anadromous and resident fish populations. The Southern Oregon/Northern California Coast Evolutionarily Significant Unit coho salmon (*Oncorhynchus kisutch*) is federally listed as threatened and is currently the only listed fish species found in the Park. The coho is also listed as State threatened from Punta Gorda to the Oregon border. Other anadromous salmonids known to occur in Mill Creek include fall chinook salmon (*Oncorhynchus tshawytscha*), chum salmon (*Oncorhynchus keta*), steelhead (*Oncorhynchus mykiss*), and coastal cutthroat trout (*Oncorhynchus clarkii*). Bird species in the Park include neotropical migrants, such as purple martin (*Progne subis*), yellow warbler (*Dendroica petechia*), and Vaux's swift (*Chaetura vauxi*), northern spotted owls (*Strix occidentalis caurina*) and old-growth-associated species such as the marbled murrelet (*Brachyramphus marmoratus*). The northern spotted owl is federally threatened, whereas the marbled murrelet is federally threatened and State endangered. An additional listed species that is known to occur in the project assessment area is the State-listed endangered bald eagle (*Haliaeetus leucocephalus)*. Marbled murrelets are commonly detected in the Hamilton Buffer Grove and may utilize the Paragon Grove although they have not been detected. Northern spotted owls have recently nested in the Park but barred owls (*Strix varia*) appear to have taken over all previously known nesting sites. The last successfully documented northern spotted owl reproduction in the Park was in 2008 at the Georges Saddle activity center. The birds from this activity center are part of study and are equipped with radio telemetry. They are still present in the Park but are not paired. A barred owl

pair took over their activity center in 2009. Nesting and roosting habitat for the northern spotted owl is limited on the Park given the lack of large trees and multi–tiered stands.

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
IV. BIOLOGICAL RESOURCES: Would the project:				
a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?	☐	☒	☐	☐
b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Game or US Fish and Wildlife Service?	☐	☒	☐	☐
c) Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?	☐	☐	☒	☐
d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?	☐	☐	☒	☐
e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	☐	☐	☒	☐
f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?	☐	☐	☒	☐

Significance Thresholds

Would the project:

a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?

b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Game or US Fish and Wildlife Service?

Less Than Significant Impact with Mitigation (a, b). No significant effect on or change in biological resources from the vegetation management activities are expected to occur due to project activities after implementation of mitigation measures. All vegetation management

activities will take place outside the breeding season for the marbled murrelet, the northern spotted owl, and all other raptor and avian species.

Proposed vegetation management along Line 87 within Del Norte Coast Redwoods State Park will be conducted in accordance with: 1) mitigation measures provided at the end of this section that have been developed based on communication with DPR and the resource agencies (CDFW and USFWS) that occurred during the early project planning stage; 2) existing DPR and resource agency policies and published guidance; and 3) the Overview of Vegetation Management Activities for Electric Transmission Line 668087 Del Norte to Yurok 69 kV (contained in Appendix A and specifically developed for Del Norte Coast Redwoods State Park to protect special special-status listed in Appendices B and C). Project mitigation measures and vegetation management procedures have been developed so that impacts on biological resources can be maintained at a less than significant level.

c) *Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?*

Less Than Significant Impact. No significant impact to any protected wetlands or other waters of the US and/or waters of the State or wetlands subject to local jurisdiction is expected as a result of project implementation since vegetation management activities are planned by design to have minimal effect. No activities resulting in direct removal, filling, hydrological interruption, or other means will occur. Impact is less than significant.

d) *Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?*

Less Than Significant Impact. See response to Biological Resources thresholds (a, b, and c) above. Loss and/or disturbance of habitat and direct impacts to individuals of special-status species are not anticipated to occur due to project implementation. Compliance with the biological resources mitigation measures and the vegetation management procedures will ensure that project implementation would not adversely affect the ability of fish and wildlife to move through the project site.

e) *Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?*

f) *Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?*

Less Than Significant Impact (e, f). The project site within State Park boundaries is not subject to a habitat conservation plan, and therefore would not be in conflict with a habitat conservation plan. Project implementation would not conflict with State Park and resource agency policies to protect biological resources. Impact is expected to be less than significant.

Mitigation Measures Incorporated into This IS/MND

Mitigation measures to reduce biological resource impacts to a less than significant level have been incorporated into this IS/MND, and are as follows:

BR-1 Pacific Power and their contractors will only remove trees larger than 30 inches diameter breast height (dbh) when:

1. A DPR approved arborist/forester has determined that the tree will fail and result in damage to the electrical facilities before the next regular inspection cycle or is an emergency to the electrical facilities and;
2. Pacific Power has received prior concurrence in writing from the DPR District Superintendent or their designee (except in the case of an emergency) and;

   If directed by DPR, Pacific Power will consult with the California Department of Fish and Wildlife and the U.S. Fish and Wildlife Service prior to DPR providing concurrence.

BR-2 Pacific Power and their contractors will restrict limbing of trees to those branches to within 20 feet of the power lines. Where possible, limbs 4 inches and greater in diameter will be shortened so that only the portion of the limb overhanging the power line will be removed rather than limbing back to the stem. The removal of pre-existing broken limbs (aka "widow makers") that clearly pose a reasonable chance of striking a power line or jeopardize worker safety can be removed regardless of height in the canopy.

If Pacific Power determines that non-broken limbs within the 20 foot clearance zone described above need to be trimmed or removed due to a reasonable chance of striking a power line or if necessary to provide for worker safety then Pacific Power will:

1. Obtain prior concurrence in writing from the DPR District Superintendent (or designee)
2. If directed by DPR, Pacific Power will consult with the California Department of Fish and Wildlife and the U.S. Fish and Wildlife Service prior to DPR providing concurrence.

BR-3 To protect the State Park's natural resource values, Pacific Power will prevent the spread of nonnative/ weed plants into parklands from the ROW. Weedy species currently known in the alignment or general area include:

1. *Cortaderia jubata*, common name jubata grass
2. *Genista monspessulana*, common name French broom
3. *Cytisus scoparius*, common name Scotch broom
4. *Hedera helix*, common name English ivy
5. *Rubus armeniacus*, common name Himalayan blackberry
6. *Senecio jacobaea*, common name tansy ragwort
7. *Cirsium vulgare*, common name bull thistle
8. *Digitalis purpurea*, common name foxglove
9. *Poa annua*, common name annual bluegrass
10. *Dactylis glomerata*, common name orchard grass
11. *Anthoxanthum odoratum*, common name sweet vernal grass
12. *Agrostis capillaris*, common name red top
13. *Geranium lucidum*, common name shining geranium

DPR and Pacific Power will work as partners to conduct post-treatment weed surveys whenever Pacific Power crews are planning work in an area or at least once every two years and if necessary, will map areas of concern that may threaten Park resources. This effort will be done cooperatively between Pacific Power and DPR. DPR and Pacific

Power will visit treated sites to monitor for weeds/non-native species particularly to capture any new or invasive releases of existing non-native species as detected by presence of seedlings/increases in cover, etc., and/or the introduction of new weed/non-native species. The introduction of new weed/non-native species is of particular concern. Should new releases or new species be detected from these surveys, DPR will contact Pacific Power to develop and implement a plan to treat and remove these populations as soon as possible. The objective of this activity will be to prevent additional weed proliferation on to DPR lands from the vegetation treatments.

BR-4 Prior to conducting operations within 100 feet of a fish bearing stream, Pacific Power will provide DPR with a list of proposed actions and will:

1. Obtain prior concurrence in writing from the DPR District Superintendent (or designee) and,
2. If directed by DPR, Pacific Power will consult with the California Department of Fish and Game prior to DPR providing concurrence.

V. CULTURAL RESOURCES

A cultural resources survey was conducted on the powerline corridor by Roscoe and Associates in the summer of 2012. A complete copy of the report is included in Appendix D of this IS/MND. The environmental setting and background information on the area are presented below.

Environmental Setting

Northwest California is a mountainous region with elongated ranges and valleys that trend in a northwesterly direction. Annual rainfall averages around 65 inches a year, creating numerous salmon-bearing streams that wind their way to the Pacific Ocean. The combination of high rainfall and topographic diversity created a complex mosaic of vegetation consisting largely of coniferous forest and mixed hardwood forest. These habitats yielded a variety of important subsistence resources, including Roosevelt elk (*Cervus canadensis roosevelti*) and black-tailed deer (*Hemionus columbianus*), as well as tan oak (*Lithocarpus densiflora*) and Chinkapin (*Castanopsis chrysophylla*), which are some of the most nutritious of all acorn varieties in California (Baumhoff 1958, Tushingham et al. 2008). North of Cape Mendocino, California and south of Cape Blanco, Oregon, this coastline follows a north-south orientation, cross-cutting several major ridge systems. Many of these ridges form extensive headlands, like those at Point St. George, which extends more than ten kilometers out to sea. Some of these offshore rocks support major Steller sea lion (*Eumetopias jubata*) breeding grounds.

Archaeological Background

The archaeology of northwestern California has been focused on culture history and chronology over time (Gould 1965, 1966, Elsasser and Heizer 1966, Fredrickson 1984). Work of the last few decades has shifted to ecological research questions where there is more interest in the human interaction with the environment through adaptation and response. Archaeology research in Tolowa territory was conducted by Richard Gould at excavations in the village site at Point St. George (Gould 1965, 1966). More recent work was conducted by Dr. Shannon Tushingham that included excavations at two sites on the Smith River (CA-DNO-26 and CA-DNO-334) at the mouth of Mill Creek and an inventory at Tolowa Dunes State Park

(Tushingham 2005, Tushingham et al. 2008). These studies have provided insight into some of the major environmental and archaeological trends within the region.

Fredrickson (1973) classified five generalized time periods and adaptive modes for the general area, including Del Norte County: the Paleoindian Period; Lower, Middle, and Upper Archaic Periods; and the Late or Emergent Period (Fredrickson 1973, Moratto 1984). A similar pattern was developed for southwestern Oregon, though time periods and point styles are often given different names in Oregon as compared to California (Tushingham 2005). The *Glade Pattern* is recognized in southwestern Oregon, though rarely discussed in northwestern California cultural chronologies. Summarized below is the cultural sequence for the northwest California archaeology and includes information for southwest Oregon.

Paleoindian Period (~11,000 to 9,000 B.P.)

A limited number of sites dating from this time occur in coastal and interior wetlands. Characteristic artifacts of this period include large, lanceolate, concave-base, fluted projectile points, and chipped stone crescents. No evidence exists for the presence of a developed plant food milling technology. Subsistence adaptation was highly mobile hunting and plant gathering within lacustrine or coastal habitats. The basic social unit was most likely the extended family. Exchange between groups presumably took place on an individual, one-to-one basis, with social groups not being heavily dependent upon exchange (Moratto 1984, Wallace 1978).

Lower Archaic (8,500 to 5,000 B.P.)

The Borax Lake Pattern, characterized as generalized hunting and gathering by small, highly mobile family groups, defines the Lower Archaic period in the Northwest Coast. Provisional dates of 3000 to 6000 years B.P. were assigned to the Borax Lake Pattern sites at South Fork Mountain based on obsidian hydration data, although radiocarbon dates were not obtained. Subsequent data based on corrected dates documented by Fitzgerald and Hildebrandt (2001) from carbon found in a soil sample at site CA-HUM-573 on Pilot Ridge, dating the assemblage to 7120 +/- 50 radiocarbon years. At this time, this is one of the earliest archaeological deposits that has been dated in the North Coast region. The artifact assemblage consists of relatively large Borax Lake Widestem projectile points (typically made of locally available chert), handstones and millingslabs, and ovoid and dome scrapers. Borax Lake Pattern sites typically contain a similar array of artifact types, implying each served as a base camp where similar activities took place, and a lack of specialization. Borax Lake Pattern sites have been identified on the Smith River near Hiouchi Flat, as well as in upland areas on Pilot Ridge and along the Trinity River near Big Bar (Fitzgerald and Hildebrandt 2001, Hildebrandt and Hayes 1983, 1984, Sundahl and Henn 1993, Tushingham 2005). Tushingham states that the artifact assemblages along the Smith River more closely resemble Glade Pattern sites identified in southwestern Oregon.

Middle Archaic Period (5,000 to 2,500 B.P.)

The Middle Archaic Period within the Northwest Coast is represented by the Mendocino Pattern. This adaptive pattern was oriented towards use of low elevation villages, located along salmon bearing streams near acorn crops and occupied by larger concentrations of people during the winter months. Compared to the earlier Borax Lake Pattern, this adoption is hypothetically

linked to the advent of fish weirs and storage facilities, particularly for fish and acorns to feed the population during the lean winter months. It represents an adaptive shift where resources were moved to the people, resulting in a variety of functionally different site types that reflect more specialized activities (Binford 1980). This shift coincided with a significant cooling trend, the Neo-glacial, beginning ca. 3300 years ago, which particularly affected the resource base of interior northwest California. The variety and productivity of upland resources declined, while annual salmon runs were more productive and reliable in local rivers. Archaeologically, Mendocino Pattern sites are marked by a greater reliance on mortars and pestles (associated with acorn processing) over millingslabs and handstones and greater variety of generally smaller projectile point forms (Willits Series and Oregon Series, distinct unifacial flake tools [McKee Uniface]). The McKee Uniface dates between 5000-3000 BP, corresponding to the late end of the Borax Lake interval and continuing into early Mendocino Pattern assemblages. Oregon series points have been identified in Middle Period contexts in sites along the Rogue and Applegate Rivers in southwestern Oregon. Middle Period components excavated on the high elevation Pilot Ridge South Fork Mountain implied specialized activities, including the establishment of native burning practices to maintain open prairies as implied by Palynological dates (Hildebrandt and Hayes 1983). It has been noted that Mendocino Pattern components at lower elevations in interior northwest California contained a diversity of artifacts including bowl mortars, pestles, non-utilitarian items, and well-developed middens. Initial use of coastal resources is evident by Mendocino Pattern components investigated at sites located at the mouth of the Mattole River (Levulett and Hildebrandt 1987). Mendocino Pattern time markers and obsidian hydration data support the finding of a Middle Period component on the northern margin of Humboldt Bay at the Arcata Sports Complex Site (Eidsness 1993). Excavations at two sites on the Smith River (CA-DNO-26 and CA-DNO-333), revealed housepit structures in Mendocino Pattern deposits and represent the earliest documented houses of their kind excavated in northwestern California. The earliest houses, hearth features, groundstone at these sites are found in Mendocino Pattern deposits, suggesting that a more sedentary collectorlike strategy was employed at this time (Tushingham et al. 2008).

Upper Archaic Period (2,500 to 1,100 B.P.)

The artifacts and assemblages of this period generally represent a continuation of the patterns from the Middle Archaic Period. Sites dating to this time are found throughout the central North Coast Ranges in moderate density. Large side- and corner-notched projectile points continue to occur, and medium-to-large, shouldered, lanceolate points begin to appear. Leaf shaped points also are present. Mano-metate grinding technology is replaced by bowl mortars and pestles, indicating initial development and elaboration of the “acorn complex” (Basgall 1987). Bone tools such as fishing equipment are present. In general, cultural components are rich in cultural materials; artifact numbers become greater, artifact categories become broader, and tool kit variability higher. Obsidian develops into the preferred toolstone in many parts of the central North Ranges, often manifested by an elaborate obsidian biface reworking industry. This is seen as reflecting greater complexity of exchange systems, characterized by occurrence of regular, sustained exchange between social groups. During the Early Late Holocene, non-utilitarian features and artifacts (e.g., beads, pendants, and rock art) begin to appear in numbers. In particular, shell beads become an important grave good artifact, and may be indicators of sustained exchange and social status differentiation. During this period, the growth of

sociopolitical complexity is evidenced by apparent development of status distinctions based upon wealth, and emergence of group-oriented religions (Hildebrandt and Hayes 1984).

Late or Emergent Period (1,100 to 150 B.P.)

The Late Period in north-coastal California exemplifies some of the most socially complex hunter-gather populations who relied heavily on marine and/or riverine resources in California (Loud 1918, Kroeber 1925, Fredrickson 1984). The Tuluwat Pattern (formally known as the Gunther Pattern) characterizes the Late Period adaptation in north-coastal California. The Tuluwat Pattern dates from ca. 1100 years B.P. to historic contact, and characterizes the material culture of the ethnographically described Wiyot, Yurok, Tolowa and other north coast tribes.

This Late Period assemblage was first described by Loud (1918) based on archaeological data from the Tuluwat site on Gunther (Indian) Island in Humboldt Bay (Wiyot territory). It comprises several specialized tool kits intended for a variety of subsistence activities, including sea and terrestrial mammal hunting, fishing, and vegetal resource procurement and storage, and a large number of wood-working tools (adzes, mauls and wedges) for the construction of plank houses and canoes. Significant traits include a well-developed wood-working technology, riverine fishing specialization, wealth consciousness, and distinctive artifact types including zoomorphs, large obsidian ceremonial blades, antler spoons, steatite bowls and pipes, and small distinctive barbed, Tuluwat Series projectile points. Populations were concentrated in permanent villages situated around Humboldt Bay and coastal lagoons, along the coast and adjacent to the major rivers. The number of sites increases dramatically at this time, with many permanent villages. This adaptation is similar to, but a more refined and specialized form, of the preceding Mendocino Pattern adaptation. Exchange networks had become regularized in the Late Period.

Trade is documented both archaeologically (Hughes 1978, Levulett and Hildebrandt 1987) and ethnographically (Powers 1877, Loud 1918, Kroeber 1925), with exchange relationships reaching north to Vancouver Island for dentalium shells, east to the Warner Mountains and Medicine Lake Highlands for obsidian, and south to the San Francisco Bay region for clam shell disc beads.

Late period sites that have been excavated north of Humboldt Bay include HUM-169 at Trinidad (Elsasser and Heizer 1964), HUM-118 at Patrick's Point (Elsasser and Heizer 1966), HUM-129 at Stone Lagoon and CA-DNO-11 at Point St. George (Gould 1966) and riverine village sites including Red Elderberry Place (CA-DNO-26) and CA-DNO-333 on the Smith River near Hiouchi Flat (Tushingham et al. 2008).

Post Contact (150 B.P. to Present Day)

Generally, traditional Native Californian material, economic, social, and ideological culture was disrupted by contact with Russian Traders, Spanish sea vessels, Euro-American settlement, and U.S. government policy. This produced significant depopulation and relocation of Native Californians from most of the lands they occupied as Euro-American material culture became dominant (Rohde 2005). As a result, Native American populations reacted and their material culture changed through a system of assimilation and acculturation into Euro-American society. These pressures resulted in a change in settlement patterns and procurement strategies; as

well as a synthesis of adaptive material culture expressed by projectile points and tools made from flaked window glass, tin cans converted to uses other than food storage (candle holders, strainers), and the presence of glass beads.

As of 2004, approximately 900 Tolowa tribal members are enrolled in the Smith River Rancheria in Smith River, California. The Rancheria is composed of 164 acres, and is situated along the Pacific Coast directly south of the California-Oregon border. One hundred Tolowa tribal members also are enrolled on the 450-acre Elk Valley Rancheria, which is located in Crescent City, California, south of the Smith River Rancheria. Tolowa tribal members also reside on the Big Lagoon Rancheria, which is located on 25 acres in Trinidad, California, and the Blue Lake Rancheria, located on 79 acres in Blue Lake, California, as well as various other communities (Smith River Rancheria 2007, Elk Valley Rancheria 2008).

Ethnographic Background

The project area is located in the ethnographic territory of the Tolowa, with ancestral territory "bounded by Wilson Creek to the South, the Sixes River to the North, East to the watershed on the Coastal Range, and West to Point St. George Lighthouse in the Pacific Ocean, to the extent not inconsistent with federal law, as well as such other lands as may hereafter be acquired. The above lands constitute [the Tolowa] place of origin and of continued habitation and occupancy, which habitation and occupancy is capable of proof at all times and is demonstrated by the ancestral villages of [Tolowa] people within these boundaries" (Smith River Rancheria 2007). The Tolowa language is assigned to the Athapascan linguistic family but remains a separate dialect from the Athapascan spoken by the Hupa and others. It is more closely related to the dialects spoken by groups along the Oregon coast (Bright and Bright 1965). The Tolowa appear to have had a coastal oriented settlement pattern with the majority of permanent villages located along the coast; however, they claimed fishing and acorn gathering areas up to about 15 miles or further inland (Gould 1978).

At the time of Euro-American contact, the Tolowa were found residing in eight coastal villages, most of which may have housed up to 300 people. The village appeared to be the primary sociopolitical unit. Each village claimed a specific section of shoreline and the boundaries of each village tract were well known and defended if necessary. The Tolowa resided in the principal villages much of the year and though they moved to inland sites to capture seasonally available resources, the primary villages were never totally abandoned. The Tolowa subsistence/settlement pattern is most relevant to predicting archaeological sensitivity of particular settings. The more common types of settlement patterns practiced by the Tolowa include: coastal - used year round; riverine - used during the spring and fall for runs of salmon and steelhead; upland - used in late summer and early fall to gather acorns and hunt deer (Gould 1978).

Of the settlement types used by the Tolowa, the coastal type was the primary focus of activities as it provided an abundant year-round supply of shellfish, sea mammals, fish, shorebirds, and edible seaweed. Generally, the entire population occupied the principal coastal zone villages, except during the late summer and fall, when families fished for smelt at sandy beaches, then moved inland to collect ripening acorns and catch salmon. Most gathering and hunting activities occurred within a 10 to 15 mile radius of the principal villages. Drucker (1937) states that

villages and fish trap sites are situated along Mill Creek between its mouth at Smith River and the forks of Mill Creek. Additionally, Drucker documents the site of *Yenthwut*, a hunting and acorn gathering site with 3-4 houses atop Child Hill, several miles to the east.

In 1961, Gould interviewed local Tolowa people and was able to identify a village geography that was true for Point St. George and *Etchulet*, approximately ten miles northwest of the project area. Tolowa villages required three important conditions: a good year round source of fresh water, a close proximity to food resources, and sufficient elevation to allow for a clear field of vision in order to see approaching parties. According to the Tolowa which Gould interviewed, villages were laid out in three functional localities: the residence area; the workshop area; and the cemetery. The residence area was characterized as having 'living' houses and sweathouses (Gould 1978).

Principal villages consisted of clusters of redwood plank houses. The houses were generally square with an outer wall of upright redwood planks about 15 feet on a side. The roof was peaked creating a two-pitched plank roof with a smoke hole. The interior contained a pit dug approximately three feet deep and 10 feet along each side. The houses were generally oriented east and west in order to ensure that the prevailing north-south winds carried the smoke away from the smoke hole. Houses were made of upright planks of redwood built over a shallow house pit. In the center of the house pit was the hearth, surrounded by upright slabs of rock. Sweathouses were generally subterranean with a single pitched roof tilted to allow rainwater to run off. These structures generally had very deep fire pits with a ventilator hole and entrance. Women's menses huts were described as brush lean-tos placed against the outer wall of the living house. Villages also contained one or more sweathouses. The Tolowa sweathouse was a semisubterranean structure with a single pitch roof. Additional structures included task specific places where fish were cleaned, stone tools were made, sea lions were butchered, and woodworking was done (Gould 1978).

Activities that took place near the villages were smelt fishing and the drying of the fish for eventual transport back to the village for storage, surf fishing, and the gathering of shellfish. Inshore resources collected included various berries and plants harvested for their fibers that were used for basketry, cordage, and net production. The most important inland resources were reported to be Tan oak acorns and salmon. Combinations of these resources were often procured from the same area. Other food resources available included waterfowl, eels, deer, and elk. Tolowa rituals had a heavy focus on subsistence related activities. Ceremonies were connected with the taking of the first salmon, eel, smelt, and sea lion (Gould 1978). The Tolowa used locally available redwood to make their plank houses and river- as well as seagoing-canoes. The seagoing canoes were used for sea lion hunting and deepwater fishing and were 30 to 40 feet long and 5 to 10 feet width.

Trade was an important part of Tolowa life, providing access to items of wealth that were locally unavailable. Trading parties were known to regularly travel up to 25 to 30 miles inland. Desired items included dentalium shells, obsidian blades, and obsidian pendants. These items were displayed at ceremonies and were said to give the owner prestige. Wealthy individuals sponsored feasts and dances and were often sought out for advice and asked to serve as intermediaries in disputes. There are currently approximately 900 Tolowa tribal members that are enrolled in the Smith River Rancheria in Smith River, California. The Rancheria is

composed of 164 acres, and is situated along the Pacific Coast directly south of the California-Oregon border. One hundred Tolowa tribal members also are enrolled on the 450-acre Elk Valley Rancheria, which is located in Crescent City, California, south of the Smith River Rancheria. Tolowa tribal members also reside on the Big Lagoon Rancheria, which is located on 25 acres in Trinidad, California, and the Blue Lake Rancheria, located on 79 acres in Blue Lake, California, as well as various other communities (Smith River Rancheria 2007, Elk Valley Rancheria 2008).

The primary published sources on Tolowa ethnography are Driver (1939), Drucker (1937), Dubois (1932, 1936), Gould (1966, 1978). Unpublished sources include Goddard's unpublished field notes (1902-1911), Merriam's field notes (1910-1938), Waterman's notes (1921-1922), Gould's unpublished dissertation (1965), and more recently Tushingham conducted contemporary ethnographic research (Tushingham et al. 2008).

Historic Background

The project area is located in the Wilson Creek and Mill Creek watersheds, south of Crescent City, in Del Norte County, California. This section will detail the economic and cultural activities that took place in this area during the late 19th century and early 20th century. Most of the northern part of the State of California was not populated by Euro-American settlers as early nor as quickly as other parts of the state south of San Francisco. The densely timbered tracts of land bordering the bay and extending like a "great belt" into the interior were a hindrance to early settlement by Euro-Americans (Coy 1982:95). With the exception of a Russian colony at Fort Ross, established in 1812, exploration and occupancy of the densely forested northern part of California did not begin *en masse* until gold was discovered there in the early 1850s.

The Union Gold Bluffs mine was established at Major Creek after gold was discovered there in 1850 (Shoup 1983). The dense redwood forests of northern California provided the timber needed by the rush of settlers arriving to stake out a claim; mills sprang up and large-scale logging was soon underway resulting in the diminishing of the once immense stands of redwood forest by the end of the 1800's. Initially the only way of transporting lumber was by custom built schooners adept at carrying lumber through the steep and rocky coastal terrain of the west coast. As the problem of transportation became less difficult with the organization of the San Francisco and North Pacific Railroad Company in 1869, the railroad became the fastest way to transport logs to mills, and timber harvesting rapidly became the largest industry in this region. Blasting with explosives was employed in the construction of railroads and highways in order to clear land through redwood forests, it was considered an efficient means of clearing stumps and assisting in grading as well as excavating through rock masses (Rohde 2008). By the mid-1890s, the northwest lumber industry had been infused with new industrial machinery that exponentially increased production and drove down market prices. The capitalization of the lumber industry caused smaller, local-run mills to be consumed by larger corporations by 1910.

The huge demand for lumber all across America was leading to the rapid depletion of this ancient resource, and preservation of the dwindling redwood forests became a prime concern of local citizens. The Save the Redwoods League was founded and succeeded in preserving intact stands of North Coast redwood groves such as Jedediah Smith Redwoods State Park, Del Norte Coast Redwoods State Park, and Prairie Creek Redwoods State Park. This did not

diminish logging in the majority of the forest that had become privately owned by the 1890s. With the onset of WWII and the subsequent economic boom of the 1950s, logging peaked so that by the 1960s nearly 90 percent of all original redwoods had been felled by logging. In 1968, Redwood National Park was established to secure some of the very few abiding groves of North Coast redwoods.

Following the Bayse Mill, which operated on Mill Creek, "six miles from Crescent City" in the late 1850s, there is no further mention of logging in the Mill Creek watershed until the era of southward expansion by Del Norte County's largest lumbering operation, Hobbs, Wall & Company (Bears 1982). In 1908, Hobbs, Wall and Co. began building the Del Norte & Southern Railroad along the western slope of Howland Hill. During World War I, the line was extended southward. This established Camp 12 where the Rellim Lodge was later built. In 1920, the company put in Camp 12-2 on Mill Creek near the later site of the Rellim Redwood Company's nursery. Hobbs, Wall and Company brought the railroad down the east slope of Howland Hill ridge to Mill Creek and then took the line two and a half miles up the west fork of Mill Creek.

Three inclined railways were built near the end of the line to convey logs from the ridgetops down to Del Norte & Southern's tracks (Rohde and Rohde 1994). Hobbs, Wall ceased operating in 1939. The company's closure was so abrupt that many years later workers from Miller-Rellim found "felled and bucked" old-growth redwood laying on the ground near the northern boundary of Del Norte Coast Redwoods State Park, apparently where the Hobbs, Wall crews had left it half a century earlier (Bearss 1982).

In the early 1940s, Miller-Rellim bought the Mill Creek tract from Hobbs, Wall and then purchased the Rock Creek tract from the Jones Timber Company in 1965. The Save-the-Redwoods League had "a long-standing position" favoring the acquisition of the Mill Creek drainage, but, in the 1960s, their plan for including the area in a proposed Redwood National Park lost out to a site centered on Redwood Creek, in Humboldt County, that was promoted by the Sierra Club (Rohde and Rohde 1994). According to one source, "Between 1954 and 2000, the [Mill Creek] property was intensively managed for commercial timber harvest that included constructing an extensive road network and converting most of the property from old-growth to early-successional coniferous forest." Mary Angle-Franzini of the Save-the-Redwoods League indicated that it was after the 1978 Redwood National Park expansion that "Miller-Rellim Lumber Company went ahead and logged off its holdings in the Mill Creek watershed." Richard Cox, however, believes that substantial cutting in the project area had occurred before that, estimating that when he began work for Miller-Rellim in 1981 "about 50% had been cut (Rohde 2005)." He indicated, however, that when he observed the drainage in the mid-1960s as an employee of the Del Norte County assessor's office, there was still "quite a bit of old growth [left] in Mill Creek."

About 1996, according to Cox, Miller-Rellim began to log second-growth timber in the watershed (Rohde 2005). Ultimately, the Save-the-Redwoods League purchased "the 25,000-acre Mill Creek redwood forest" in 2002 from Stimson Timber Company, fulfilling "a priority for the League for more than 70 years." The Mill Creek watershed is now included within the congressionally authorized boundary of Redwood National Park – Prairie Creek Redwoods State Park, Del Norte Coast Redwoods State Park, and Jedediah Smith Redwoods State Park. The State Parks are under the jurisdiction of the California Department of Parks and Recreation

(DPR). In 1994, the NPS and DPR signed a Memorandum of Understanding providing for joint management of the four parks as a partnership under the name Redwood National and State Parks. These Parks contain 45 percent of all the remaining old-growth redwood forest remaining in California. The parks are designated by the United Nations Education, Scientific and Cultural Organization as a World Heritage Site and an International Biosphere Reserve. These places are managed to preserve, protect, and make available to all people, for their inspiration, enjoyment, and education, the forests, scenic coastlines, prairies, and streams, and their associated natural and cultural values, which define this World Heritage Site, and to help people forge emotional, intellectual, and recreational ties to these Parks.

	Potentially Significant Impact	**Less Than Significant with Mitigation Incorporated**	**Less Than Significant Impact**	**No Impact**
V. CULTURAL RESOURCES. Would the project:				
a) Cause a substantial adverse change in the significance of a historical resource as defined in § 15064.5?	☐	☒	☐	☐
b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to § 15064.5?	☐	☒	☐	☐
c) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	☐	☒	☐	☐
d) Disturb any human remains, including those interred outside of formal cemeteries?	☐	☐	☐	☒

Would the project:

1. *Cause a substantial adverse change in the significance of a historical resource as defined in § 15064.5?*
2. *Cause a substantial adverse change in the significance of an archaeological resource pursuant to § 15064.5?*
3. *Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?*

Less than Significant with Mitigation Incorporated. The Cultural Resources Survey Report prepared by Roscoe and Associates (Appendix D-1) determined that the Hobbs, Wall logging railroad is considered a potentially significant historic resource that should be avoided during vegetation management activities. Intact trestle pillars are standing within 40 feet of Pacific Power Pole #9/13, along Hamilton Road. The trestle pillars have been flagged with State Park cultural resources flagging. Vegetation management crews will comply with Mitigation Measure CR-1 and will not disturb the Hobbs, Wall logging railroad (P#-8-0000296H). Other than the historic railroad trestle remnants, no artifacts, features, sites or other cultural materials were identified during the cultural resource investigation. Roscoe and Associates conducted field

surveys, and reviewed the geologic setting, historic and modern land uses, and past disturbances, and recommend no further cultural resource studies for the project. Mitigation Measures CR-1 and CR-2 will ensure that potential project impacts on cultural resources are maintained at a less than significant level.

d) Disturb any human remains, including those interred outside of formal cemeteries?

No Impact. State law requires that if human remains are encountered, all work shall halt and the County Coroner shall be notified (Sections 5097 and 7050.5 of the Public Resources Code). Compliance with this requirement will not be affected by vegetation management activities. No impact will occur.

Mitigation Measures Incorporated into This IS/MND

CR-1 The Hobbs, Wall logging railroad (P#-8-0000296H) shall be considered a potentially significant historic resource and shall be avoided during vegetation management activities. Intact trestle pillars are standing within 40 feet of Pacific Power Pole #9/13, along Hamilton Road. The trestle pillars have been flagged with State Park cultural resources flagging. All trestle elements associated with the grade in this location shall be avoided during vegetation management activities under the powerline or near the power poles.

CR-2 Should any previously unknown cultural resources be uncovered, they shall be identified, sites recorded, mapped and artifacts catalogued as required by standard practices.

VI. GEOLOGY AND SOILS

Environmental Setting

Line 87 ROW is located in the Northern California Coast Range and the Western Klamath Mountains Province, expressed as northwest trending mountains and valleys formed by the convergence of the Gorda and North American tectonic plates. The bedrock within the Coast Range consists of Franciscan Broken Formation. These rocks are tectonically fragmented interbedded greywacke, shale and conglomerate (Blake and Jones, 1974). Highly sheared serpentinite and peridotite of the Klamath Mountains Province underlie the northeastern portion of the project area (Madej et. al., 1986). The Coast Range and Klamath mountain provinces are separated by the Coast Range Thrust Fault. Geologic activity, soil types, and high levels of rainfall have created steep and potentially unstable slopes. Past land use and the construction of poorly designed roads have destabilized some slopes and are presently contributing to additional instability. Moderate to high seismic activity can be expected in this area, with associated ground shaking, block-falls, and liquefaction of saturated sediments. Deeper seated landslides have a very low potential for renewed movement as a result of this project because of the high canopy retention.

The soils and Quaternary fluvial deposits of the area are derived from the Franciscan Formation and Tertiary deposits. Generally, weakly-lithified Tertiary fluvial, marine, and estuarine rocks crop out primarily along Childs Hill and Little Bald Hills. The Franciscan Formation includes primarily sedimentary rock, along with some igneous and metamorphic rock material. The

principal rock material is greywacke, highly variable sandstone with angular medium-sized grains, mixed with shale and siltstone. Igneous and metamorphic rocks, including serpentinite, are also combined in the substrate along the Coast Range Thrust Fault, on the east-northeast side of the Park. The shale has a high proportion of angular mineral and rock fragments, with only a small amount of clay materials.

Geology and soils along Line 87 are displayed in Figure 5 Geology and Figure 6 Soils. Characteristics of the Natural Resources Conservation Service (NRCS) soils as mapped in Figure 6 are described in Table 3-3.

Table 3-3. Pacific Power Line 87 ROW Soils Within State Park

Symbol	Label	Characteristics
116	Swainslough, 0 to 2 percent slopes	*General location:* Alluvial plains of rivers and major creeks in coastal areas of Northern California *Typical vegetation:* Cultivated pasture grasses and forbs *Slowest permeability class:* Slow
126	Loleta, 2 to 5 percent slopes	*General location:* Alluvial plains of rivers and major creeks in coastal areas of Northern California *Typical vegetation:* Cultivated pasture grasses and forbs *Slowest permeability class:* Moderately slow
155	Samoa-Clambeach-Dune land complex, 0 to 50 percent slopes	*General location:* Northern Coast of California *Typical vegetation:* The native vegetation is a shifting dune mat community of American beachgrass *(Ammophila breviligulata),* yarrow *(Achellea millefolium),* beach strawberry *(Fragaria chiloensis),* beach wormwood *(Artemisia pycnocephala),* beach tidytips *(Layia carnosa),* coastal sand verbena *(Abronia latifolia),* goldenrod *(solidago californica),* California polypody *(Polypodium californicum),* Brewer's rush *(Juncus brewri),* coyotebrush *(Baccharis pilularis),* and scattered shore pine. Non-native areas are composed of European beachgrass *(Ammophila arenaia)* planted to prevent sand movement and yellow bush lupine *(Lupinus arboreus),* iceplant *(Mesembryanthemum edule),* pampas grass *(Cortaderia Stapf),* and other herbaceous cover. *Slowest permeability class:* Rapid
157	Beaches-Samoa-Dune land complex, 0 to 50 percent slopes	*General location:* Northern Coast of California *Typical vegetation:* Scattered European searocket *(cakile maritima* Scop.) or sand verbena *(Abronia* Juss.) on upper wave slopes *Slowest permeability class:* Rapid
174	Bigtree-Mystery complex, 2 to 9 percent slopes	*General location:* Throughout Redwood National and State Parks *Typical vegetation:* The overstory is dominated by redwood *(Sequoia sempervirens)*. Small groups or individuals of Sitka spruce *(Picea sitchensis),* western hemlock *(Tsuga heterophylla),* or Douglas-fir *(Pseudotsuga menziesii)* grow in scattered areas throughout the unit. Some grand fir *(Abies grandis)* also grows. The understory is dominated by western swordfern *(Polystichum munitum)* and includes salal *(Gaultheria shallon),* deer fern *(Blechnum spicant),* and redwood- sorrel *(Oxalis oregana)*. *Slowest permeability class:* Moderate

Table 3-3. Pacific Power Line 87 ROW Soils Within State Park

Symbol	Label	Characteristics
194	Tsunami, 2 to 9 percent slopes	*General location:* Along Enderts Beach Road south of Crescent City *Typical vegetation:* The existing plant community is dominated by sweet vernalgrass *(Anthoxanthum odoratum),* velvetgrass *(Holcus* spp.), silver hairgrass *(Aira caryophyllea),* tall fescue *(Schedonorus phoenix),* western brackenfern *(Pteridium aquilinum),* and buttercup *(Ranunculus* spp.). In places, pasture is reverting to a forest of Sitka spruce *(Picea sitchensis),* cascara *(Frangula purshiana),* Himalayan blackberry *(Rubus armeniacus),* and California huckleberry *(Vaccinium ovatum)*. *Slowest permeability class:* Slow
580	Coppercreek-Tectah-Slidecreek complex, 9 to 30 percent slopes	*General location:* Mill, Rock, Wilson, and Hunter Creek watersheds *Typical vegetation:* The overstory is dominated by redwood *(Sequoia sempervirens)* with small amounts of Douglas-fir *(Pseudotsuga menziesii)* and western hemlock *(Tsuga heterophylla)*. Tanoak *(Lithocarpus densiflorus)* forms the subcanopy. The understory is dominated by Pacific rhododendron *(Rhododendron macrophyllum),* California huckleberry *(Vaccinium ovatum),* and salal *(Gaultheria shallon)*. The forb cover is limited. *Slowest permeability class:* Moderately slow
581	Coppercreek-Slidecreek-Tectah complex, 30 to 50 percent slopes	*General location:* Mill, Rock, Wilson, and Hunter Creek watersheds *Typical vegetation:* The overstory is dominated by redwood *(Sequoia sempervirens)* with small amounts of Douglas-fir *(Pseudotsuga menziesii)* and western hemlock *(Tsuga heterophylla)*. Tanoak *(Lithocarpus densiflorus)* forms the subcanopy. The understory is dominated by Pacific rhododendron *(Rhododendron macrophyllum),* California huckleberry *(Vaccinium ovatum),* and salal *(Gaultheria shallon)*. The forb cover is limited. *Slowest permeability class:* Moderately slow
582	Slidecreek-Lackscreek-Coppercreek complex, 50 to 75 percent slopes	*General location:* Mill, Rock, Wilson, and Hunter Creek watersheds *Typical vegetation:* The overstory is dominated by redwood *(Sequoia sempervirens)* with small amounts of Douglas-fir *(Pseudotsuga menziesii)* and western hemlock *(Tsuga heterophylla)*. Tanoak *(Lithocarpus densiflorus)* forms the subcanopy. The understory is dominated by Pacific rhododendron *(Rhododendron macrophyllum),* California huckleberry *(Vaccinium ovatum),* and salal *(Gaultheria shallon)*. The forb cover is limited. *Slowest permeability class:* Moderately slow

Table 3-3. Pacific Power Line 87 ROW Soils Within State Park

Symbol	Label	Characteristics
583	Trailhead-Wiregrass complex, 9 to 30 percent slopes	*General location:* Mill and Rock Creek watersheds *Typical vegetation:* The overstory is dominated by Douglas-fir *(Pseudotsuga menziesii)* with tanoak *(Lithocarpus densiflorus)* in the subcanopy. Redwood *(Sequoia sempervirens) is a minor associate of the overstory. The understory is dominated by California huckleberry (Vaccinium ovatum) with small amounts of Pacific rhododendron (Rhododendron macrophylum) and salal (Gaultheria shallon). Grasses and forbs are either limited in extent or not present.* *Slowest permeability class:* Slow
584	Wiregrass-Pittplace-Scaath complex, 9 to 30 percent slopes	*General location:* Mill and Rock Creek watersheds *Typical vegetation:* The overstory is dominated by Douglas-fir *(Pseudotsuga menziesii)* and redwood *(Sequoia sempervirens)* with tanoak *(Lithocarpus densiflorus)* in the subcanopy. Pacific madrone *(Arbutus menziesii)* is also present in small amounts. The understory is dominated by tanoak and California huckleberry *(Vaccinium ovatum)*. *Slowest permeability class:* Moderately slow
590	Sasquatch-Yeti-Footstep complex, 5 to 30 percent	*General location:* Near the coast and along Highway 101 *Typical vegetation:* The overstory is dominated by redwood *(Sequoia sempervirens)* with small amounts of Douglas-fir *(Pseudotsuga menziesii),* western hemlock *(Tsuga heterophylla),* and red alder *(Alnus rubra)*. Douglas-fir is not present on all sites, and Sitka spruce *(Picea sitchensis)* is the more common species in many places near the coast. The understory is dominated by western swordfern *(Polystichum munitum)* with some patches of California huckleberry *(Vaccinium ovatum)* or salmonberry *(Rubus spectabilis)* and salal *(Gaultheria shallon)*. *Slowest permeability class:* Slow
591	Sasquatch-Sisterrocks-Ladybird complex, 30 to 50 percent	*General location:* Near the coast and along Highway 101 *Typical vegetation:* The overstory is dominated by redwood *(Sequoia sempervirens)* with small amounts of Douglas-fir *(Pseudotsuga menziesii),* western hemlock *(Tsuga heterophylla),* and red alder *(Alnus rubra)*. Douglas-fir is not present on all sites, and Sitka spruce *(Picea sitchensis)* is the more common species in many places near the coast. The understory is dominated by western swordfern *(Polystichum munitum)* with some patches of California huckleberry *(Vaccinium ovatum)* or salmonberry *(Rubus spectabilis)* and salal *(Gaultheria shallon)*. *Slowest permeability class:* Moderately slow

Table 3-3. Pacific Power Line 87 ROW Soils Within State Park

Symbol	Label	Characteristics
592	Sisterrocks-Ladybird-Footstep complex, 50 to 75 percent	*General location:* Near the coast and along Highway 101 *Typical vegetation:* The overstory is dominated by redwood *(Sequoia sempervirens)* with small amounts of Douglas-fir *(Pseudotsuga menziesii),* western hemlock *(Tsuga heterophylla),* and red alder *(Alnus rubra)*. Douglas-fir is not present on all sites, and Sitka spruce *(Picea sitchensis)* is the more common species in many places near the coast. The understory is dominated by western swordfern *(Polystichum munitum)* with some patches of California huckleberry *(Vaccinium ovatum)* or salmonberry *(Rubus spectabilis)* and salal *(Gaultheria shallon)*. *Slowest permeability class:* Moderately slow
593	Sasquatch-Yeti-Sisterrocks complex, 15 to 30 percent slopes	*General location:* Hillslopes that have direct exposure to the ocean *Typical vegetation:* The overstory is dominated by Sitka spruce *(Picea sitchensis)* and red alder *(Alnus rubra)* with redwood *(Sequoia sempervirens)* as a rare associate. Sitka spruce and red alder occur in a mosaic pattern due to disturbances. Douglas-fir *(Pseudotsuga menziesii)* is codominant on a few sites, but not commonly. The understory is dominated by salmonberry *(Rubus spectabilis)* and western swordfern *(Polystichum munitum)*. On some sites, salal *(Gaultheria shallon)* coexists with the salmonberry. *Slowest permeability class:* Slow
594	Sisterrocks-Sasquatch-Houda complex, 30 to 75 percent slopes	*General location:* Hillslopes that have direct exposure to the ocean *Typical vegetation:* The overstory is dominated by Sitka spruce *(Picea sitchensis)* and red alder *(Alnus rubra)* with redwood *(Sequoia sempervirens)* as a rare associate. Sitka spruce and red alder occur in a mosaic pattern due to disturbances. Douglas-fir *(Pseudotsuga menziesii)* is codominant on a few sites, but not commonly. The understory is dominated by salmonberry *(Rubus spectabilis)* and western swordfern *(Polystichum munitum)*. On some sites, salal *(Gaultheria shallon)* coexists with the salmonberry. *Slowest permeability class:* Moderately slow

Table 3-3. Pacific Power Line 87 ROW Soils Within State Park

Symbol	Label	Characteristics
596	Flintrock-Highprairie complex, 15 to 75 percent slopes	*General location:* Hillslopes that have direct exposure to the ocean *Typical vegetation:* The existing plant community is a complex mosaic of coastal scrub and prairie. It is comprised of perennial grasses and forbs. The dominant perennials grasses include various fescues *(Festuca* spp.), tall oatgrass *(Arrhenatherum elatius),* and annual vernalgrass *(Anthroxanthum aristatum)*. Shrubs and woody vines, such as coyotebrush *(Baccharis pilularus),* California buckthorn *(Rhammus californica),* thimbleberry *(Rubus parviflorus),* California blackberry *(Rubus ursinus),* and Himalayan blackberry *(Rubus discolor)* are also present. Cow parsnip *(Heracleum* spp.) and western brackenfern *(Pteridium aquilinum)* and a few, scattered and stunted Sitka spruce *(Picea sitchensis)* or Douglas-fir *(Pseudotsuga menziesii)* are present on some sites. *Slowest permeability class:* Slow

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Seismicity

Seismicity in the region is high. The Park and project area would be strongly affected by groundshaking generated by rupture of the Cascadia subduction zone. The surface trace of the zone lies about 100 kilometers offshore to the west of the Park; however, the fault dips below the Park at a depth of about 20 kilometers. This zone is capable of large magnitude earthquakes. Depending on site-specific characteristics, potential seismic hazards in the Park include liquefaction, landsliding (discussed in the preceding section), and strong to violent, possibly amplified, ground shaking. The potential for liquefaction within the project area is most common on floodplains and terraces or steep slopes with a shallow water table. Slopes having the highest potential for shallow instability, which include slopes subject to liquefaction, were identified by Merrill et al. (2011). Available mapping of earthquake faults is indicated in Figure 5 Geology.

The project site is likely to receive violent groundshaking in the event of a large magnitude earthquake nearby. In addition to the Cascadia Subduction Zone, active faults (producing movement within the last 11,000 years) that would produce strong ground shaking in the Park include the Big Lagoon – Bald Mountain fault, capable of magnitude 7.5 earthquakes; the Whaleshead fault, capable of magnitude 7.0 earthquakes; and the Trindad fault, capable of magnitude 7.5 earthquakes.

Table 3-4. Earthquake Faults

Fault Name & Geometry[1]	Slip Rate (mm/year)	Recurrence Interval (years)	Maximum Moment Magnitude	Last Known Fault Displacement
Big Lagoon-Bald Mountain (thrust)	0.9	1380	7.5	No Data
Whaleshead (strike slip)	2.4	145	7.0	No Data
Trindidad (thrust)	4.4	1900	7.5	No Data
Cascadia Subduction Zone (thrust)	40	200-800	9.0	1700

(References: Toppozada, T., Borchardt, G., Haydon, W., Petersen, M., Olson, R., Lagorio, H., and Anvik, T., 1995, Planning scenario in Humboldt and Del Norte counties, California for a great earthquake on the Cascadia Subduction Zone, California Department of Conservation, Division of Mines and Geology, Special Publication 119, 157 pages; and http://earthquake.usgs.gov/research/hazmaps/products_data/2002/faults2002.php)

Soils

Soil development occurs in response to the weathering of the parent material (rocks and alluvial deposits) and input from surface materials (vegetation), and varies depending on the topography (slope, aspect, and hydrologic conditions), underlying rock composition, and time. The soils in the Park are generally well developed because the mild, wet climate has caused a high degree of weathering of the underlying permeable materials. Most of the soils have strongly developed surface horizons that are rich in organic matter and nutrients, particularly in areas that have coniferous vegetation. In some places, the top soil may be relatively thin owing to the steep slopes and past logging disturbance.

Figure 6 Soils and Table 3-3 address ROW soils as mapped by NRCS. Seventeen soil associations are identified in this mapping. With respect to surface erosion, approximately 75 percent of the land base has a severe erosion hazard rating.

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
VI. GEOLOGY AND SOILS. Would the project:				
a) Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:				
i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.	☐	☐	☒	☐
ii) Strong seismic ground shaking?	☐	☐	☒	☐
iii) Seismic-related ground failure, including liquefaction?	☐	☐	☒	☐
iv) Landslides?	☐	☐	☒	☐
b) Result in substantial soil erosion or the loss of topsoil?	☐	☐	☒	☐
c) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?	☐	☐	☒	☐
d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property?	☐	☐	☒	☐
e) Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water?	☐	☐	☐	☒

Would the project:

a) Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:

i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.

ii) Strong seismic ground shaking?

Less Than Significant Impact (a.i and a.ii). Del Norte County is not included on the Alquist-Priolo Earthquake Fault Zoning Map. No new structures will be constructed as a result of project implementation. The project would not expose people or structures to rupture of a known earthquake fault due to project implementation. The project is located in a seismically active area. Crews performing vegetation management in a forested area during an earthquake event would need to follow safety procedures associated with vegetation management

procedures and activities. Any adverse impacts due to seismic activity would, thereby, be maintained at a less than significant level.

a.iii) Seismic-related ground failure, including liquefaction?

a.iv) Landslides?

c) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?

Less Than Significant Impact (a.iii, a.iv, c). Seismic-related ground failure and landslides are possible in the project area. The 2009 EDAW Mill Creek Addition General Plan Amendment (GPA)/Final EIR noted that: 1) geologic activity, soil types, and high levels of rainfall have created steep and potentially unstable slopes in certain sections of the State Park; and 2) past land use and road construction have destabilized some slopes, contributing to additional instability. The proposed vegetation management procedures restrict activities associated with vegetation management, road maintenance and vehicle use on backcountry roads and will serve to protect soil stability and prevent road damage. The State Parks' policy governing seasonal road use will be observed (Appendix F). A less than significant impact is expected to occur.

b) Result in substantial soil erosion or the loss of topsoil?

Less Than Significant Impact. Restrictions on vehicle use on backcountry roads will be observed. Activities along fish-bearing streams will be restricted through vegetation management procedures and Biological Resource Mitigation Measure BR-4. Sedimentation will thereby be prevented, protecting water quality and aquatic habitat. Impact on soil erosion and loss of topsoil will be less than significant.

d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property?

Less Than Significant Impact. Expansive soils are an issue when structures are proposed to be constructed. Project activities are limited to vegetation management. No structures are proposed; hence, no impact regarding expansive soils will be experienced.

e) Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water?

No Impact. Project activities are limited to vegetation management. Installation of septic tanks or alternative waste water disposal systems will not occur. Therefore, no impact will occur.

VII. GREENHOUSE GAS EMISSIONS

Environmental Setting

The State of California has enacted key legislation in an effort to reduce its contribution to climate change. Assembly Bill (AB) 32, the California Global Warming Solutions Act of 2006, requires that greenhouse gases emitted in California be reduced to 1990 levels by the year 2020. The Air Resources Board is the State agency charged with monitoring and regulating sources of emissions of greenhouse gases. AB 32 requires the Air Resources Board to adopt

and implement a list of discrete and early action greenhouse gas reduction measures, which was completed in October 2007.

Climate change is a result of greenhouse gases emitted all around the world from sources such as the combustion of fuel for transportation and heat, cement manufacture, and refrigerant emissions. The previous analysis for Air Quality contained in this IS/MND estimates the daily estimated emissions from chain saws, the primary source of emissions associated with proposed vegetation management activities. An estimate for CO_2e is provided as part of the air quality analysis. The NCUAQMD does not specify a threshold for CO_2e; hence, the threshold for CO_2e from the Bay Area AQMD was utilized. Estimated project emissions from chain saw use is calculated to represent 459.55 pounds per day, or approximately 6.92 percent of the daily emissions allowance permitted for CO_2e.

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
VII. GREENHOUSE GAS EMISSIONS. Would the project:				
a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?	☐	☐	☒	☐
b) Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?	☐	☐	☒	☐

Would the project:

a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?

Less Than Significant Impact. This estimated daily contribution is well below the significance threshold for CO_2e, and considered to have a less than significant greenhouse gas impact at both the project and cumulative levels.

b) Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?

Less Than Significant Impact. Predicted levels of CO_2e associated with the proposed vegetation management project are considered to have a less than significant impact in terms of generating greenhouse gas emissions and will not inhibit the State's ability to implement AB 32. The impact on the applicable plan, policy and/or regulation to reduce greenhouse gas emissions is considered less than significant.

VIII. HAZARDS AND HAZARDOUS MATERIALS

Environmental Setting

Physical hazards on the Pacific Power ROW in the Park are similar to any outdoor setting and include steep slopes, rushing water, poisonous plants, wild animals, disease carrying insects, and inclement weather. The project area is in a remote portion of Del Norte County and transportation to the nearest hospital would require an hour drive time from some locations. No airports are located within 3.2 km (2 mi) of the project site nor are there any airstrips within the Park or adjacent to Park property. Helicopter landing locations have been identified and geo-referenced throughout the Park (and could be used to evacuate personnel in an emergency).

No fuel storage facilities currently exist within or adjacent to the project area. Pacific Power employees and contractors will be filling chainsaws with fuels during operations.

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
VIII. HAZARDS AND HAZARDOUS MATERIALS. Would the project:				
a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	☐	☐	☒	☐
b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?	☐	☐	☒	☐
c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	☐	☐	☐	☒
d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?	☐	☐	☐	☒
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area?	☐	☐	☐	☒
f) For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area?	☐	☐	☐	☒
g) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	☐	☐	☐	☒

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
h) Expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?	☐	☐	☒	☐

Would the project:

a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?

b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?

Less Than Significant Impact. The project proposes to conduct vegetation management activities along Line 87. Transport, usage, storage, and/or disposal of fuels and oils will occur related to the fueling, operation and maintenance of vegetation management equipment. Activities related to the transport, usage, storage and/or disposal of fuels and other fluids required for vegetation management equipment are subject to federal, State, and local health and safety requirements, mandating that all precautions be taken so that project implementation does not create a health hazard, or use, produce, or dispose of materials that pose a hazard to the project site and vicinity. Fuels and other fluids will be stored, used, and disposed of in accordance with all applicable regulations and requirements. Identified vegetation management procedures also restrict the handling of fuel, oils or chemicals to road and/or trail surfaces, or other somewhat impermeable surfaces that are not tributary to any potential or flowing drainage course. A less than significant impact is expected.

c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?

No Impact. The project site is not located within one-quarter mile of an existing or proposed school, and does not involve the handling of hazardous materials in quantity or at a level that could generate hazardous emissions. No impact will occur.

d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?

No Impact. The regulatory database check performed for the proposed project (see Appendix E) indicates that the project site is not contained within a listed hazardous materials site. A significant hazard to the public or the environment will not be created. No impact will occur.

e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area?

f) For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area?

No Impact (e, f). The project is located in a remote portion of Del Norte County, and no existing airports or airstrips are located within or adjacent to the project site. The closest public use airport is located approximately 15 miles to the north, on the north end of Crescent City. The closest airstrip is Jack McNamara Field, approximately 10 miles northwest of the project site. Implementation of the proposed project would not result in a safety hazard for people working in the project area in association with airports or airstrips.

g) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?

No Impact. Implementation of the proposed project would not conflict with any emergency response plans for Del Norte County. Also, project implementation would not interfere with the provision of emergency services to park visitors and access for emergency vehicles. Helicopter landing locations have been identified throughout the project area (EDAW 2009). Project implementation will not interfere with the existence or operation of helicopter landing locations. Project implementation will actually result in better access along some backcountry roads and ATV trails where limited clearing is performed and/or obstructions are removed. No adverse impact on an adopted emergency response plan or emergency evacuation plan will occur.

h) Expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?

Less Than Significant Impact. Maintenance and crew members will follow safe practices for equipment use and in the prevention of accidental fuel spills. Project vegetation management activities will reduce the threat from wildfires by addressing contact points of vegetation with power line conductors that can cause wildfires, threatening the public, wildlife and habitat with the National and State Parks. No adverse impact will occur.

IX. HYDROLOGY AND WATER QUALITY

Environmental Setting

The portion of Line 87 within the State Park is located in the North Coastal Basin, which covers an area of approximately 13,775 square kilometers (8,560 square miles) located along the north central California Coast. Water quality in the Park ranges from extremely clear and free of any pollutants, in streams that drain from old growth forests, to turbid, poor quality in areas previously impacted by humans; however, while there are short duration spikes in turbidity, the overall water quality is among the best in Northern California. The North Coast Regional Water Quality Control Board regulates water quality in the area of California where the Park is located, and is responsible for implementing the Water Quality Control Plan for the North Coast Region.

The Water Quality Control Plan for the North Coast Region describes North Coast Region water quality and quantity problems, and the present and potential beneficial uses of the surface and groundwaters within the Region. Precipitation in the Park occurs primarily in the six months from November through April. Summer showers are infrequent, with winter rainfall accumulations of up to 203 centimeters (80 inches). During the summer months, a thick fog frequently blankets

the coastal areas. The prevailing wind direction is northwesterly during the spring, summer, and fall, and shifts to southeasterly during the winter season. Wind speed along the coast is typically 24 to 40 kilometers per hour (15 to 25 miles per hour [mph]), with gusts up to 80 kilometers per hour (50 mph) during winter storms.

Groundwater in the Park is relatively free of pollutants and considered very high quality because very few potential pollution sources exist. The groundwater table in the Park fluctuates annually, depending on rainfall and seasonal temperatures. The groundwater table varies throughout the area because of the geological or topographical influences. The area does not serve to recharge commercially available aquifers. There are no public water sources in the area impacted by the proposed project.

	Potentially Significant Impact	**Less Than Significant with Mitigation Incorporated**	**Less Than Significant Impact**	**No Impact**
IX. HYDROLOGY AND WATER QUALITY. Would the project:				
a) Violate any water quality standards or waste discharge requirements?	☐	☐	☒	☐
b) Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted)?	☐	☐	☒	☐
c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation on- or off-site?	☐	☐	☒	☐
d) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site?	☐	☐	☒	☐
e) Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?	☐	☐	☒	☐
f) Otherwise substantially degrade water quality?	☐	☐	☒	☐
g) Place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map?	☐	☐	☐	☒
h) Place within a 100-year flood hazard area structures which would impede or redirect flood flows?	☐	☐	☐	☒
i) Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam?	☐	☐	☐	☒

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
j) Inundation by seiche, tsunami, or mudflow?	☐	☐	☐	☒

Would the project:

a) Violate any water quality standards or waste discharge requirements?

e) Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?

f) Otherwise substantially degrade water quality?

Less Than Significant Impact (a, e, f). Water quality objectives in the Water Quality Control Plan for the North Coast Region do not allow any degradation of surface or groundwater, or permit any alternation of natural conditions that result in water resource degradation.

The project proposes to conduct vegetation management activities along the portion of Line 87 within the State Park, No housing or other structures are proposed, and visitation levels in the State Park will not increase due to planned activities. Vegetation management procedures and Biological Resources Mitigation Measure BR-4 will serve to protect water quality and respect hydrological processes. All equipment and vehicles employed in vegetation management will be washed off site before entering the State Park, State Park backcountry road driving policies will be observed, and vegetation management activities near fish-bearing streams will be restricted by BR-4, collectively preventing sedimentation and protecting aquatic species.

The proposed project would not violate any water quality standards or waste discharge requirements. Runoff levels will not be affected from existing conditions. Impact will be less than significant.

b) Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted)?

Less Than Significant Impact. Groundwater in the project area is relatively free of pollutants and considered very high quality because very few potential pollution sources exist. The groundwater table varies throughout the project area because of geological or topographical influences. The local groundwater table fluctuates annually, depending on rainfall and seasonal temperatures. The area does not serve to recharge commercially available aquifers. There are no public water sources in the area impacted by the proposed project. Impact on groundwater supplies and recharge will be less than significant.

c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation on- or off-site?

d) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site?

Less Than Significant Impact (c,d). See analysis for Threshold VI.b. Vegetation management activities associated with the proposed project will not substantially alter the existing drainage pattern of the project site or area. Ground disturbance will be limited and minimal. Erosion, siltation, and flood risk levels will not be substantially affected and impacts will be less than significant.

g) Place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map?

h) Place within a 100-year flood hazard area structures which would impede or redirect flood flows?

i) Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam?

j) Inundation by seiche, tsunami, or mudflow?

No Impact (g-j). The project proposes to conduct vegetation management activities along the portion of Line 87 within the State Park. No housing or other structures are proposed as part of the project. The project would not place structures within a 100-year floodplain to impede or redirect flood flows. The project would not expose people or structures to a risk of loss, injury, or death involving flooding. Additionally, the project site and vicinity is located at elevations above those in danger of inundation by seiche or tsunamis (EDAW 2009). The proposed project is not located in close proximity to any other large bodies of water and does not contain any enclosed bodies of water. The project would not be subject to mudflows. No impact will occur.

X. LAND USE AND PLANNING

Environmental Setting

The proposed project is located within the boundaries of the State Park which is designated for recreation in Del Norte County. The intended purpose of the Park is to preserve outstanding natural, scenic, and cultural values, and indigenous aquatic and terrestrial fauna and flora and allow for recreational opportunities consistent with other uses. The Park property directly links large areas of old-growth coast redwood forest within Redwood National and State Parks with National Forests located in the western Klamath-Siskiyou Mountains. The park is bordered by Jedediah Smith Redwoods State Park to the north, other portions of Del Norte Coast Redwoods State Park to the west, Six Rivers National Forest to the east, and private industrial timberlands to the south. The property encompasses a large portion of the Mill Creek watershed (37 km^2 [923 mi^2]) tributary to the Smith River, a large portion of the Rock Creek watershed [19 km^2 (12 mi^2) tributary to the South Fork Smith River, and small headwater portions of the Terwar (1.6 km^2 [1.0 mi^2]), Hunter (0.64 km^2 [0.4 mi^2]), and Wilson (3.2 km^2 [2 mi^2]) creek watersheds.

Redwood National Park, Jedediah Smith Redwoods State Park, Del Norte Coast Redwoods State Park, and Prairie Creek Redwoods State Park are cooperatively managed under a Memorandum of Understanding between the NPS and DPR. The Memorandum of Understanding includes lands within the congressionally-authorized boundary of Redwood

National Park, often collectively referred to as Redwood National and State Parks. Each agency maintains its management authority and operates their lands under their applicable laws and policies; however, joint State and federal management is intended to enhance protection of Park resources and improve public service using combined State and federal resources. A General Management Plan and Environmental Impact Statement/Environmental Impact Report were prepared by the Redwood National and State Parks to provide "a defined, coordinated direction for resource preservation and visitor use and a basic foundation for decision making and managing for the following 15 to 20 years". The joint plan, approved in 2000, covers approximately 3,484 km^2 (165 mi^2) and focuses on park establishment, cooperative management of park resources, and the visitor experience.

The General Management Plan was amended by the General Plan Amendment (GPA) in 2011 to include the Mill Creek Watershed property. The vision statement as described in the GPA states that management practices "are tailored to promote, maintain, and restore ecological functions of the habitats to a pre-European condition." The Line 87 ROW within the Del Norte Coast Redwoods State Park is contained within the Mill Creek property. The powerline ROW within the State Park does not occur within developed areas or areas designated by the GPA for potential development.

The Del Norte County General Plan presents the Mill Creek Watershed as State Land but does not specifically address activities or management goals for the property. Del Norte County has also zoned the area as Parks/Open Space.

	Potentially Significant Impact	**Less Than Significant with Mitigation Incorporated**	**Less Than Significant Impact**	**No Impact**
X. LAND USE AND PLANNING. Would the project:				
a) Physically divide an established community?	☐	☐	☐	☒
b) Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?	☐	☐	☐	☒
c) Conflict with any applicable habitat conservation plan or natural community conservation plan?	☐	☐	☒	☐

Would the project:

a) Physically divide an established community?

b) Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?

No Impact (a, b). An established community is not present at the project site; therefore, the project would not adversely affect any communities. State Parks are not subject to local or

regional land use plans or policies, with the exception of a local coastal plan (EDAW 2009). The project would be consistent with the Del Norte County Coastal Plan. No land use impacts would occur.

c) Conflict with any applicable habitat conservation plan or natural community conservation plan?

Less Than Significant Impact. The project site within State Park boundaries is not subject to a habitat conservation plan. Impacts on biological resources from project implementation will be less that significant with mitigation, and no conflict with a habitat conservation plan or natural community conservation plan will occur. The impact will be less than significant.

XI. MINERAL RESOURCES

Environmental Setting

No significant mineral resources have been identified within the boundaries of the Park. Mineral resource extraction is not permitted within State Park property.

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
XI. MINERAL RESOURCES. Would the project:				
a) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?	☐	☐	☐	☒
b) Result in the loss of availability of a locally-important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?	☐	☐	☐	☒

Would the project:

a) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?

b) Result in the loss of availability of a locally-important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?

No Impact (a, b). The project site does not contain important mineral resources and mineral resource extraction is not permitted on State Park property (EDAW 2009). Implementation of the proposed project would not result in the loss of known mineral resources; therefore, no impact would occur.

XII. NOISE

Environmental Setting

The Powerline ROW is located in rugged forested terrain in northern California, surrounded by steep mountains and the Pacific Ocean. Ambient noise associated the project area results from

administrative uses on Park roads; Park visitors such as hikers, mountain bikers, and horses, and occasional air traffic consisting of small private planes, Coast Guard helicopters, and CalFire firefighting aircraft.

The Park contains special status wildlife species that can be adversely affected by excessive noise during their nesting and breeding seasons. The Del Norte County General Plan regulates daytime ambient noise levels that exceeds 52 decibels (acoustic) measured at residential properties. The closest residential property is over 1 mile from the project area with a forest and ridge (Rellim ridge) between the two.

The USFWS has developed guidelines for eliminating noise impacts to threatened and endangered wildlife species in this area. These guidelines include restrictions on the use of noise-generating equipment during the breeding season of the marbled murrelet and the Northern Spotted Owl from September 15 to February 1 in potential habitats. These restrictions apply to any use of noise-generating equipment throughout the powerline area.

	Potentially Significant Impact	**Less Than Significant with Mitigation Incorporated**	**Less Than Significant Impact**	**No Impact**
XII. NOISE. Would the project result in:				
a) Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?	☐	☐	☒	☐
b) Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels?	☐	☐	☒	☐
c) A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?	☐	☐	☒	☐
d) A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?	☐	☐	☒	☐
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?	☐	☐	☐	☒
f) For a project within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels?	☐	☐	☐	☒

Would the project result in:

a) *Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?*

b) *Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels?*

Less Than Significant Impact (a, b). Adjacent and surrounding land uses are primarily recreational with some private timberland to the south. The closest residential property is over one mile from the project area with a forest and ridge (Rellim ridge) between the two. Vegetation maintenance would occur during daylight hours only. Noise sources would be spread across large areas of land and would be anticipated to occur only very rarely in places that would affect Park visitors and/or Park employees. Trimming will only occur in the Park from September 16 to January 31. Noise and ground vibration is expected to have limited effect on people. A less than significant impact would occur.

c) A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?

Less Than Significant Impact. No permanent increase in ambient noise levels is expected to occur since the proposed project involves vegetation maintenance with mobile, temporary noise sources. A less than significant impact is expected.

d) A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?

Less Than Significant Impact. Vegetation management procedures prohibit vegetation management work to be conducted in the Park from February 1 to September 15 during the breeding seasons of the Northern Spotted Owl and the Marbled Murellet. A temporary increase in noise will occur, but only during the shortened daylight hours in winter during the roughly 18week period between September 16 and January 31 during which vegetation management activities will be allowed. A less than significant impact is expected.

e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?

f) For a project within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels?

No Impact (e, f). The project is located in a remote portion of Del Norte County, and no existing airports or airstrips are located within or adjacent to the project site. The closest public use airport is located approximately 15 miles to the north, on the north end of Crescent City. The closest airstrip is Jack McNamara Field, approximately 10 miles northwest of the project site. Implementation of the proposed project would not expose people residing or working in the project area to excessive noise levels in association with airports or airstrips. No impact will occur.

XIII. POPULATION AND HOUSING

Environmental Setting

Construction and State Park staff generally live in nearby Crescent City. Occasionally, Park staff or contract workers may camp on site in tents or travel trailers. The trailers are required to be self-contained and located on existing roads, landings, or other areas used by seasonal work crews. No housing exists within the project area.

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
XIII. POPULATION AND HOUSING. Would the project:				
a) Induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?	☐	☐	☐	☒
b) Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?	☐	☐	☐	☒
c) Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?	☐	☐	☐	☒

a) Induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?

b) Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?

c) Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?

No Impact (a-c). An established community is not present at the project site and the project would not induce population growth and/or displace a substantial number of existing housing units or substantial numbers of people. No impact would occur.

XIV. PUBLIC SERVICES

Environmental Setting

The project area is located in a remote portion of Del Norte County. The nearest school (Crescent Joe Hamilton Elementary School) is located approximately 6 km (4 mi) away. Police protection is provided by State Park Rangers. DPR also coordinates with the Del Norte County Sheriff Department and California Highway Patrol for law enforcement services (EDAW 2009). Fire protection is provided by the California Department of Forestry and Fire Protection (CalFire) with the nearest fire station located in Crescent City, California. A limited number of the main logging roads within the Park are open to the public on weekends for hiking, biking and horseback riding.

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
XIV. PUBLIC SERVICES.				
a) Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services:				
Fire protection?	☐	☐	☒	☐
Police protection?	☐	☐	☒	☐
Schools?	☐	☐	☐	☒
Parks?	☐	☐	☐	☒
Other public facilities?	☐	☐	☒	☐

Would the project:

a) *Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services:*

Fire protection?
Police protection?

Less Than Significant Impact. Vegetation activities along Line 87 within Del Norte State Park have occurred over the years. Fire and police protection services are, therefore, not expected to experience new increased demand from project implementation and should not be adversely affected. Project vegetation management activities will reduce the threat from wildfires by addressing contact points of vegetation with power line conductors that can cause wildfires, threatening the public, wildlife and habitat within the National and State Parks. Impacts to fire and police services are considered less than significant.

Schools and Parks?

No Impact. The project would manage vegetation within the project site and would not result in increased demand on existing schools and parks. Visitation levels at the State Park would not be affected. No adverse impact would occur.

Other public facilities?

Less Than Significant Impact. Emergency ground and air transport services are provided by Del Norte Ambulance and Cal-Ore for transport to larger hospitals in Eureka, Medford, or Redding. The closest hospital with emergency services is Sutter Coast Hospital, which is located approximately 8 miles from the project site, in Crescent City (EDAW 2009).

Unforeseeable accidents along the power line that could occur from implementation of the project would generate demand for emergency services. Vegetation management along the power line has occurred historically, however. Emergency services are, therefore, not expected to experience new increased demand from project implementation and should not be adversely affected. Impacts to emergency services are considered less than significant.

XV. RECREATION

Environmental Setting

The Park is open to the public on weekends during daylight hours for hiking, biking and horseback riding. Several of these roads link to the Howland Hill portion of Redwood National Park. Visitors are required to stay on roads designated as open to the public. Other portions of the Park contain a campground and hiking trails.

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
XV. RECREATION.				
a) Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?	☐	☐	☐	☒
b) Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?	☐	☐	☐	☒

a) Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?

b) Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?

No Impact (a, b). The project would manage vegetation within the project site and would not increase the use of parks or other recreational facilities. The project does not include recreational facilities or require the construction or expansion of recreational facilities. No impact would occur on parks or other recreational facilities.

XVI. TRANSPORTATION/TRAFFIC

Environmental Setting

The Park currently contains over 523 km (325 mi) of roads and associated skid trails that were built to facilitate timber extraction by the previous owner. The majority of these roads are not drivable due to dirt berms, fill removed from water crossings, and vegetation growing over the roads. A network of roads remains open for restoration work and some are open to the public on

a limited basis. The roads are used by Pacific Power to access the powerline. The roads provide access to ATV trails which lead to the tops of ridgelines where the powerline was built.

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
XVI. TRANSPORTATION/TRAFFIC. Would the project:				
a) Conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit?	☐	☐	☒	☐
b) Conflict with an applicable congestion management program, including, but not limited to level of service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways?	☐	☐	☒	☐
c) Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that result in substantial safety risks?	☐	☐	☐	☒
d) Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?	☐	☐	☐	☒
e) Result in inadequate emergency access?	☐	☐	☐	☒
f) Conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities?	☐	☐	☐	☒

Would the project:

a) *Conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit?*

b) *Conflict with an applicable congestion management program, including, but not limited to level of service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways?*

Less Than Significant Impact (a,b). Limited vehicle traffic along public roads leading into and within the State Park would be generated by workers commuting to and from work. Vegetation maintenance vehicle traffic would occur within the project site along the power line ROW, utilizing backcountry roads and ATV trails that are not accessible to Park visitors. Some of the

trails are never used by others and thus Pacific Power must keep them passable to access the powerline. The intent is to keep the roads and ATV trails open for use by the professional crews that need access to the powerline without making the forest or the ridgelines more accessible to the public. Adherence to State Park policy governing road use in Redwood National and State Parks, and vegetation maintenance procedures provided herein will ensure that roads and ATV trails are protected during use by powerline crews.

Del Norte County has limited congestion, and as such, the Del Norte Local Transportation Commission does not have a congestion management plan in place. Efforts by the Transportation Commission are underway to prepare a 2011 Regional Transportation Plan, however.

The proposed project would not conflict with any circulation system plans or congestion management programs. A less than significant impact will be experienced in terms of traffic and congestion.

c) Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that result in substantial safety risks?

No Impact. The project is located in a remote portion of Del Norte County, and no existing airports or airstrips are located within or adjacent to the project site. The closest public use airport is located approximately 15 miles to the north, on the north end of Crescent City. The closest airstrip is Jack McNamara Field, approximately 10 miles northwest of the project site. Implementation of the proposed project would not impact air traffic patterns. No impact would occur.

d) Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?

e) Result in inadequate emergency access?

f) Conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities?

No Impact (d-f). Project implementation will not result in modification to any public use roads. Hazard levels to existing roadways will not be affected. Equipment for vegetation maintenance will be operated along backcountry roads and ATV trails, which are not accessible to the public. Limited trimming on the ATV trails will keep the trails open should access to the power line ROW be required by emergency or fire crews, improving emergency access. It is also critical that soil damage, increases in erosion, and degradation of vegetation and wildlife habitat be prevented by proper road use and maintenance. Vegetation management procedures described herein are also intended to help accomplish these goals. The proposed project would not conflict with policies or plans regarding public transit, bicycle, or pedestrian facilities. No adverse impact will be experienced.

XVII. UTILITIES AND SERVICE SYSTEMS

Environmental Setting

The powerline ROW site lies almost entirely within Del Norte Coast Redwoods State Park, a forested park. The ROW site is in a remote setting. There are no trash pickup services in the

project area. The Pacific Power powerline is on high poles above the forest canopy. Woody debris from vegetation management are to be left in the forest where possible according to prescribed procedures addressed within this IS/MND. All work done in the ROW area is done with portable gasoline-fired or hand-operated equipment.

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
XVII. UTILITIES AND SERVICE SYSTEMS. Would the project:				
a) Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?	☐	☐	☒	☐
b) Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	☐	☐	☒	☐
c) Require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	☐	☐	☐	☒
d) Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?	☐	☐	☒	☐
e) Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?	☐	☐	☒	☐
f) Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?	☐	☐	☒	☐
g) Comply with federal, state, and local statutes and regulations related to solid waste?	☐	☐	☒	☐

Would the project:

a) Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?

e) Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?

Less Than Significant Impact (a,e). The project proposes to engage in vegetation management activities along the powerline corridor. The project plans to include thinning and trimming of the highest growing vegetation under and adjacent to the powerline, and vegetation clearing and cutting of downed logs within transmission corridor access roads. No new facilities will be constructed that would generate wastewater. Use of State Park restroom facilities by work crews when vegetation management activities are underway is not expected to substantially increase existing wastewater generation levels. The project would not exceed

wastewater treatment requirements, nor would the project require substantially increased wastewater treatment capacity. A less than significant impact would occur.

b) Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?

Less Than Significant Impact. See analysis for thresholds (a) and (e) above. No new water or wastewater treatment facility or facility expansion would be required for the proposed project. Water supplies for the work crews will consist only of personal containers of water taken on and off the site. A less than significant impact would occur.

c) Require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?

No Impact. No new storm water drainage facility or facility expansion would be required for the proposed vegetation management project. No impact would occur.

d) Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?

Less Than Significant Impact. See analysis for thresholds (a), (b) and (e) above. Proposed vegetation management activities would not substantially affect water use within the State Park. Potable water supplies for the work crews will consist only of personal containers of water taken on and off site. Use of State Park restroom facilities by work crews when vegetation management activities are underway is not expected to substantially affect water consumption levels. A less than significant impact would occur.

f) Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?

g) Comply with federal, state, and local statutes and regulations related to solid waste?

Less Than Significant Impact (f, g). No solid waste will be generated from trimming and thinning activities; thus, there will be no off site disposal to landfills. Handling of vegetation material cut during the maintenance activities will be as indicated in the procedures specified throughout this document. A less than significant impact will occur.

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